Precision SHOOTING

September 1960
Vol. 5, No. 5
35 cents

John I. Moore of San Angelo, Texas, winner of the Heavy Varmint Rifle Championship with a Remington Model 40X .222, being awarded the GUN DIGEST TROPHY by John T. Amber, editor of the well-known annual.

a magazine for Shooters by Shooters

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LEARN TO SHOOT

The following brief editorial comment appearing in the Rutland Herald, the leading daily newspaper in southern Vermont, and reprinted in the Burlington Free Press, the leading daily in northern Vermont, is to the point, sensible and sound. It pretty much reflects the general attitude toward shooting in Vermont newspapers. The direct quote of the item is:

"LEARN TO SHOOT: Those who are trained to use firearms properly know how to use them so that they and others will be safe. They will also get more game, if they know how to shoot, and if they know how to shoot only when they can see and identify what they are shooting at."

That is saying a lot in a few words. Newspaper editors are sensible people—they have to be. Probably many of them have little if any personal familiarity with firearms and their use. If it may be explained to them that training in the use of firearms, and practice with them to develop skill in their use, is of the same importance as is proper training and practice in the driving of an automobile, and in each case, understanding of the implement gained from training and skill in use developed by practice contributes to the safety of both the user and others, they should be able to see the point. It then should not be too hard to convince them that some editorial promotion for firearms training is a public service and within their service traditions.

An anti-firearms sentiment among the general public is just as harmful to we crazy target shooters as to any other section of the shooting fraternity, and we should each accept a personal responsibility for having our case fairly presented in the court of public opinion.

P. H. T.

BRITISH BENCH REST SHOOTERS' ASSOCIATION

We have just learned that the British Bench Rest Shooters' Association was formed last month (August) with the aim of promoting precision shooting in the British Isles. Mr. R. N. Martin, 87 Albemarle Road, Beckenham, Kent, England, is the secretary for the new association.

Mr. Martin has requested from our own NBRSA all available information on our U. S. bench rest program, organization, equipment, etc., which may aid the BBRSA in setting up its activity program. We feel sure that our NBRSA will welcome the opportunity to give all the help it possibly can to the new BBRSA.

The above is all the information we have about the new British organization at present. Past correspondence has indicated that British shooters had considered bench rest shooting, as we in the U. S. know it, to be impractical in Britain, due to regulations which practically prohibited individuals hand-loading or reloading rifle and handgun ammunition. We now wonder if those regulations may have been relaxed. We will probably learn if that is the case or not in due time.

In the past our NBRSA has claimed "World Records" for small bench rest groups and aggregates; and were reasonably safe in so doing since no other similar organization was known to exist. It now appears that in the foreseeable future our own NBRSA should be cautious about claiming bench rest "World Records" until it is certain that they are such.

It does now seem the "bench rest" is starting to "grow up." It will be desirable that bench rest shooting programs in all countries taking up this type of shooting should be similar enough that progress in precision accuracy may be directly comparable throughout the world.

P. H. T.

HARVEY DONALDSON WRITES

Dear Phil:

Have had several letters from you, but this is the first chance I have had to answer them. Guess this will have to do for my September letter, but next month I hope to have plenty to write about. My mail is so heavy I should have a secretary to help handle it. Seems as if I can never get caught up. Maybe I had better head for Maine again and try and find Millie.

Did I ever tell you about that wonderful Maine air? It may seem strange to you, living in Vermont, but I have found that the further down east you go, the better the air. And I go so far east the next town is in New Brunswick. It may well be that that is the reason this Maine air is so wonderful.

The coast of Maine sticks way out into the Atlantic Ocean, and the sun hits that part of the country FIRST. No doubt about that. So—they get the first crack at the fresh morning breeze that springs up at day-break. You should get up that early, but no fooling, that is the best time to see the sun come up.

Why, mister, by the time daylight has traveled across these United States, it is pretty well worn out, yeah, and dirty. When this dirty air reaches the West Coast they call it Smog.

Friend Ackley called on me August 5th. We had quite a visit. It may seem strange to you but Ackley and I AGREE on more matters pertaining to guns and shooting than anyone else I can mention. He is a native New Yorker, having been born in Granville, New York, which is near the Vermont line. This was his first trip East in quite some time. Ackley did a nice job in re-boring one of my good .22 cal. barrels up to 6 m/m, and just as soon as I get the stock made up, will start testing.

Tony Studenic and I plan to do considerable deer hunting this coming fall. We will hunt first in Maine, in October and then in November you can look for us at your camp in northern Vermont. Those prints you sent along sure look good to me, and the country looks good for easy hunting. Years ago I used to gallop up one mountain to drive the deer off the top and then hunt down the other side, but for some reason or other the country shown in the pictures sent me recently, SURE LOOKS GOOD to me now. My hunting gear is always in order and ready to go, so Tony and I will take off in his Jeep, and be heading north, by east, before long.

Sincerely,

Harve

THEY LIKE IT

Friend Bill Edwards of GUNS Magazine recently passed along a comment that reflects a somewhat common reaction toward bench rest shooting by people who are not intimately acquainted with the bench rest competitive program and the people who participate in it. He wrote:

"Though I haven't the right, not being a member of the BR family, to criticize, I think Cline Deere's 50 pound log of wood is rather ridiculous if allowed in a BR **rifle** shoot. Next time why not give the palm to a Modern Bond Universal action on a pier of concrete?"

Each type of competitive shooting program has something a little different from all other types, and these little differences are what attract people to participate in any particular program. The bench rest shooting program permits the greatest freedom for experimentation with rifled tubes and the opportunity to test the worth of different ideas in competition under uniform conditions and rules. That freedom does attract the do-it-yourselfers with an overgrown bump of curiosity in the firearms field to the bench rest shooting program.

Anyone with an idea that **might possibly** attain improved accuracy from a rifled tube is free to try it and, if test results seem to warrant it, to test it in an open competitive field at a bench rest match. Unconventional ideas in rifle construction are the obvious things to spectators at a bench rest match, or to readers of reports of bench rest matches. The bench resters, themselves, will readily admit that the results of some rifle experiments are weird contraptions, but it is the performance rather than the appearance of the gun that they pay attention to.

In the fifteen years that the present day bench rest shooting program has been in existence, the people who have participated in it have learned a number of things about improvement of accuracy of rifles and ammunition that can be and now are being adapted by both firearms fabricators and rifle shooters, quite generally.

The newer bench rest shooting programs, restricted to lighter weight rifles of more conventional design, are demonstrating that the points for improving accuracy which were learned and proven with the unlimited weight and design bench rest rifles are equally applicable to the lighter rifles. Individual but non-competitive shooters are finding this true for light, field weight sporter rifles in the big game class calibers.

In this present competitive season, the winning **5-shot** groups and aggregates fired in the Heavy Varmint Rifle class (13½ lb. max. weight for combined rifle and scope) matches have compared favorably with the winning 10-shot groups and aggregates with the unrestricted bench rest rifles, even the 50 pounders. Note the winning aggregates of the two classes of rifles at the Johnstown, N. Y., Labor Day Matches (page 10 this issue), where the two classes competed on the same range, on the same days and under similar weather conditions.

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THE COLOMBIAN NATIONAL MATCHES

Major David B. Parsons

(Editor's introduction: Major Parsons, USA, Distinguished Marksman and one of many of the military people with an ardent interest in shooting as a sport, is presently stationed at Fort Gulick, Canal Zone. He was Executive Officer (and we suspect one of the instigators) of the "Pan-Am Military Matches" reported in the June issue. In his letter accompanying this report, he writes:

"I recently returned from the National Shooting Matches of Colombia, South America, as official spectator of the Army of the United States in the Caribbean and as guest of the Colombian Shooting Association. I am enclosing a little story about the match that may possibly interest your readers.

"The Pan-Am Military match appears to have vitalized interest in marksmanship south of Texas. These shooting associations love the sport as much as we do in the States and I hope that a few U. S. shooters can manage to get down to these countries to observe some of their shooting events. These neighbors to the south are fine sportsmen and make worthy competitors for any group of shooters.")

The National Matches of Colombia were held in Medellin, Colombia, South America, the 18th through the 21st of July, under the sponsorship of the Colombian Shooting Association. This very well organized affair was attended by approximately 80 shooters, competing in the following events:

Free Rifle 50 meters (new target); Free Pistol 50 meters; Rapid Fire Pistol 25 meters, silhouette target; Center Fire Pistol 25 meters, silhouette target; Junior event, fired with .22 rifles, range 25 meters, fired on the 50 meter international pistol target; and Skeet.

The firing lines appeared, from an equipment viewpoint, exactly as any Stateside firing event. American rifles and ammo, together with American cartridge boxes, spotting scopes, glasses, gloves, etc, all brought back a touch of nostalgia to the writer. The seriousness of the competitors and the professional no-nonsense attitude of both competitors and range officials spoke well for the status of shooting in Colombia today. The shooting fraternity of Colombia must participate in their pastime under rather severe governmental regulations, which quite rigidly prohibit ownership of arms and ammo. Unless the shooter desires to face a lot of rigamarole and official zealousness he must preclude his desire to shoot. Even the purchase of .22 ammo must receive official sanction. Reloading is forbidden due to the prohibition of ownership of powder. It was rather a sad sight to see .38 brass and thousands of shotshells being shovelled into the garbage, and this sight would undoubtedly affect others the way it affected me—(a slight gnashing of the teeth followed by a sigh). Therefore it was all the more gratifying to see such a well organized group of shooters going at it for this four day period.

The Colombian Army provided target details and general range support (shades of Camp Perry) and at no time did I notice any time lag due to inefficiency or lack of supervision. The targets and skeet birds were all made in Colombia, and the targets particularly were beautifully lithographed on a very high grade paper, the equals of any stateside brand. The skeet birds were manufactured by hand in a little hut and they had only managed to find the right formula that would insure good "bustability" a week or so before the match. The birds behaved perfectly throughout the match, and appeared exactly as those of U. S. manufacture.

A number of the shooters were using Anschutz and Haemmerli free rifles in .22 caliber. Many of the shooters had duplicated the thumbhole stocks for their 52s and 37s (the 40X is apparently unknown in Colombia at this time). On the basis of their interest in restocking American rifles, I left behind my only copy of Al Freeland's catalog plus Roy Dunlap's address. A little flag waving never hurts.

As for rifle and pistol ammo, the great majority were using Mark III, with a few of the shooters using German made RWS, which appeared to perform well. The shotgunners were using predominantly Winchester and Remington skeet loads, with again a few using Belgium Coopals shells. These latter gave a few functioning problems apparently due to the difference in paper and pressure. All rifle shooters appeared to be using the American style military leather

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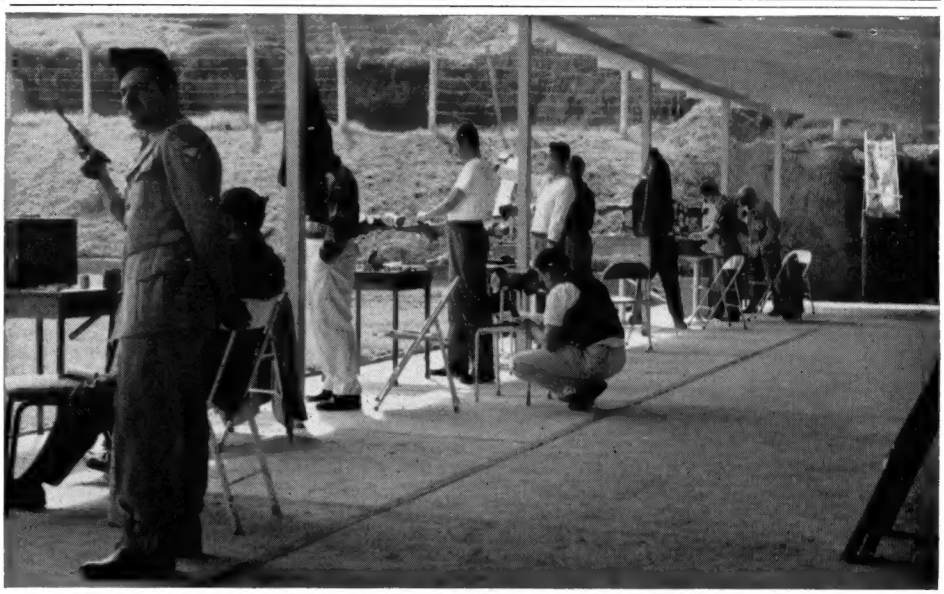
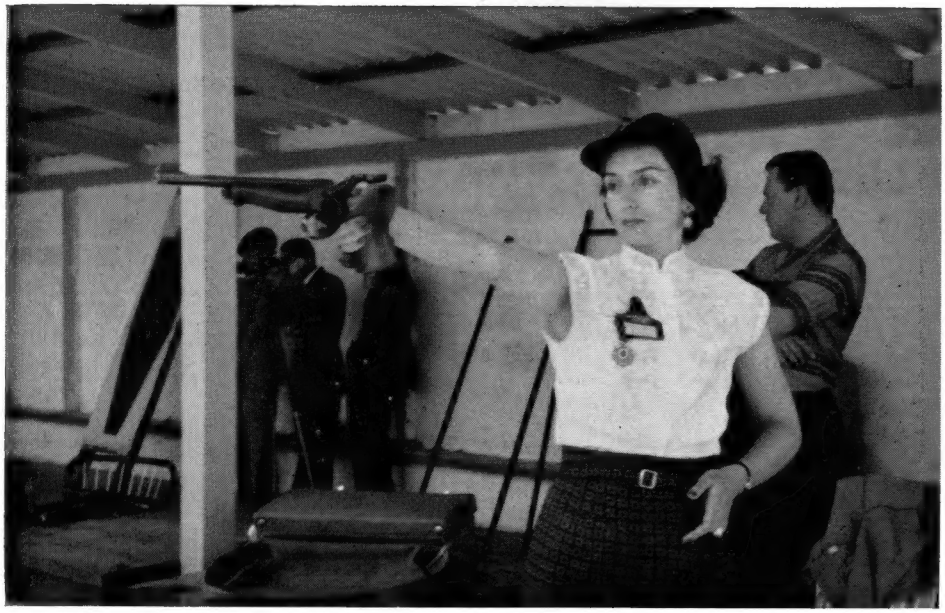
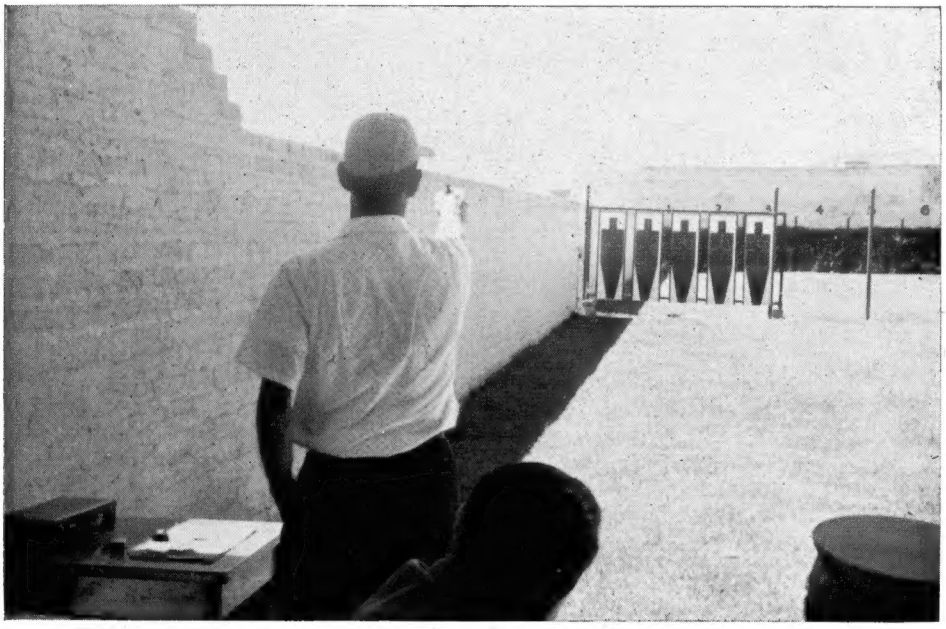


A general view of the covered firing point during the fifty meter free pistol event. Club de Tiro de Medellin.

In any language, it's the same old target detail. Targets are made in Colombia, lithographed on very high grade paper. Colonel Guillermo Guzman, at the right, is the "sparkplug" of Colombian marksmanship.



Senora Clemencia de Valserra, wife of the free rifle representative for the Colombian Olympic Team. Mrs. Valserra was one of a number of lady shooters competing in the Colombian National Matches.



Firing the 25 meter rapid fire international silhouette targets. Targets were not turned, times being controlled by a whistle. A 552/60 took this event.

The Colombian National Matches

(Continued from Page Three)

slings.

Scores were good, but I feel could have been considerably better if the shooters had had more experience firing under the pressure of competition, a finding not too rare among our own clan. The free rifle winner, Jose Maria Valserras, fired a 1070 at 50 meters (Haemmerli with Mark III) to win a berth on the Colombian Olympic team, yet in practice this gentleman has broken 1120. Sgt. Hoe Balvin won the free pistol honors with a 525 (Haemmerli with Mark III) yet has broken 540 in practice. These two men will be in Rome by the 17th of August. In skeet, there was not one 25 straight fired, despite the preponderance of 50 straight and 100 straight jacket badges. Which goes to prove that buck-fever is international in concept.

One thing of interest to this tired old soldier was the appearance of several lady shooters, firing both free pistol and international rapid fire pistol. And they weren't there just for decoration. These gals made some of the men sit up and take notice (no pun intended).

As a few added notes for the tourist; phone calls in Colombia cost less than 1½ cents U. S. apiece, the finest filet mignon in the finest restaurants cost about $1.50 U. S., gasoline is 14 cents a gallon, a five mile taxi ride runs about 45 cents. It's enough to bring tears to your eyes upon returning to the States. The climate in Medellin is always temperate and refreshing, with never an uncomfortable moment. The people are very friendly, courteous and helpful. There is a serious competent nucleus of competition shooters in every good-sized town. And all this just five hours out of Miami!

They Like It

(Continued from Page Two)

But the bench resters are not going to stop their quest for the illusive 10-shots in one bullet-size hole accuracy and will try any means they can think of to attain that goal. That is what makes bench rest shooting attractive to these people. THEY LIKE IT. The jibes of other people will not deter them in the least.

P. H. T.

SWAGED VERSUS CAST HANDGUN BULLETS

By William E. Peterson

There is a difference, perhaps not great enough to materially affect the scores of the average target shooter, but still definite. After a long series of tests covering at least four hundred swaged bullets and almost as many cast bullets, with charges up to 3.8 grains of Bullseye, the scale began to tip in favor of the swaged and jacketed variety. All firing was at fifty yards, with a Smith & Wesson K-38 revolver.

The swaged bullets were made in a beautifully finished Bahler handgun bullet die set, product of Bahler Die Shop, 1600 Thompson Road, Coos Bay, Oregon. These dies produce a half-jacketed bullet, in full wadcutter, semi-wadcutter, or hollow point type. As excess lead is extruded through several small bleed holes in the die, the density and weight uniformity of the bullets are assured.

The cast bullets were produced from a very good four cavity mould by Hensley and Gibbs, 2692 E Street, San Diego 2, California. It is fair to say that if the manually cast bullets could be moulded with the same mechanical uniformity as the swaged bullets were made, the difference might have been overcome. This was to some extent nullified by using only selected and weighed cast bullets. Moreover, with only one mould the same weight cast bullet was used throughout the tests, while with the Bahler die set, which could be adjusted for any desired bullet length, bullets in weights from 135 to 175 grains were used. This freedom to select any desired bullet weight without additional equipment is of course one of the advantages of swaging over casting. Smallest groups resulted from a 155 grain bullet and 3½ grains of Bullseye powder.

The series of tests was made not only to determine ammo performance but also to develop a method of testing relative handgun accuracy with easily made equipment which would give constant results without the supremely accurate but also expensive and complicated pistol machine rest, beyond the resources of the average shooter.

It was early demonstrated that dependable results could not be expected when the gun was held in the shooter's hand, no matter what system of rests was devised. The first departure from this was a two by six inch block of hard maple fourteen inches long. A slot was cut in the end of this to make a close fit when the stock of the gun, with wood grips removed, was forced into it. The wood was then drilled for 5/16th inch carriage bolts at four points surrounding the gun stock. This arrangement could be shot like a bench rest rifle. Results, while encouraging, were not entirely satisfactory.

The final development was two pieces of ⅞ by 6 inch spruce board, 21 inches long, clamped one on each side of the gun in place of the usual wood grips, with bolts running through around the gun frame. Spruce being a fairly soft wood, permitted the gun frame to sink perceptibly into the wood as the nuts were tightened down, aiding rigidity. Between the boards at the rear of the assembled stock a spacer of thin wood was inserted and bolted in place. This arrangement gave consistent results at the target, although it was necessary to tighten the bolts now and then as they sank into the wood and reduced the holding tension.

Although full bench rest technique was used, the sighting was over the usual Patridge type open pistol sights, with only a 7 inch sight radius. This of course introduced some possibility of human error which was no doubt reflected in the size of the groups. A telescope sight mounted on the gun would undoubtedly have given much smaller groups. However the effort was to develop a simple, easily made and inexpensive device which would give reliable information of ammo accuracy.

In the final version, fifty yard groups of 3½ inches with cast bullets were quite common. It was interesting to note that while cast bullets of uniform weight and apparently perfect form were used, in most groups there would be one or two that had wobbled slightly in entering the target. In comparison the swaged bullets made groups of 3 and even 2½ inches with entire absence of wobble.

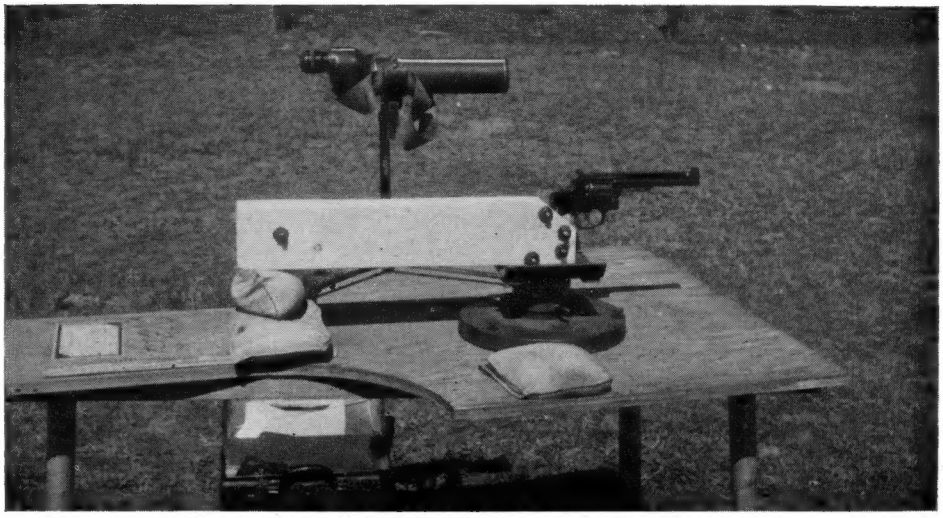
Getting down to bed rock, the point is that with the investment of perhaps 75 cents for material and less than an hour's work, you are set to determine if the poor shooting you did last weekend was—as of course you believe—due to the load you used, or to some other cause such as those two cups of strong coffee you imbibed at breakfast, too much smoking, or the late party you attended the night before. And if you find it is the ammo, then you are prepared to quickly prove which of several experimental loads is actually best for your gun.

(Editor's comment: I had an opportunity to shoot the device described above by Mr. Peterson. The photos quite well illustrate the device and method of using it. Both Mr. Peterson and I use the left eye for aiming, so, for right eyed shooters the position of shooter would simply be reversed from that shown in the photo.

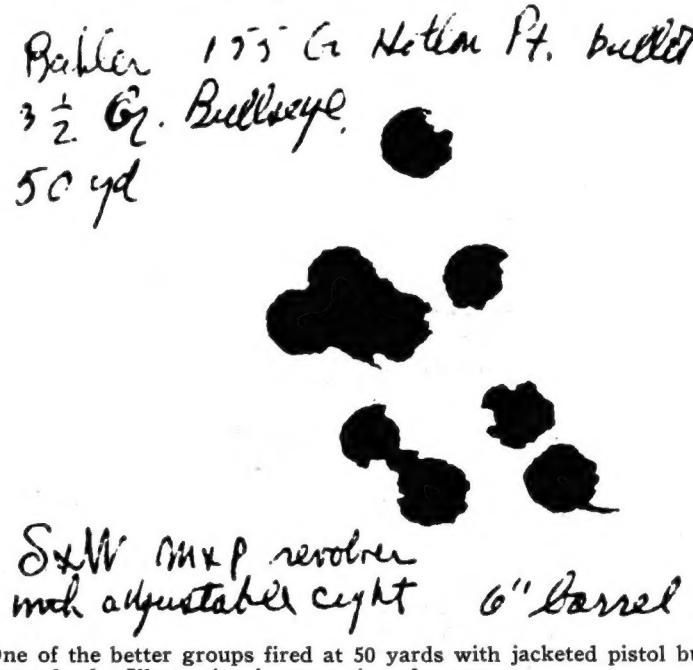
The 21 inch "stock" is too long to permit shooting this device as one would a rifle, but it is felt that this length is desirable for best control of the device in shooting. For this shooting, the normal trigger. 8he thumb of the trigger hand bag under the rear of the "stock" to control the aiming, and the other hand reaches comfortably forward to release the trigger. The thumb of the trigger hand curls lightly over the pistol frame behind the hammer to control the roll of the gun upon firing.

In firing the handgun with this device there is little "rise" of the muzzle of the gun, as is the case when firing in normal manner from the hand. The straight "stock" provides a resistance to recoil which is parallel to the bore line of the gun, and in effect, very little below the bore line. The free recoil distance of the gun with .38 Special target load is barely an inch, due to weight of the complete assembly and friction resistance of the resting points. Probably in shooting magnum guns with full loads a fairly firm grip of the thumb over the frame of the gun stock would be desirable to better control the "roll," which is caused by the torque of the bullet passing through the rifled barrel. The free recoil distance with magnum loads would of course be greater than for target loads, but would probably be less than expected when shooting this device.

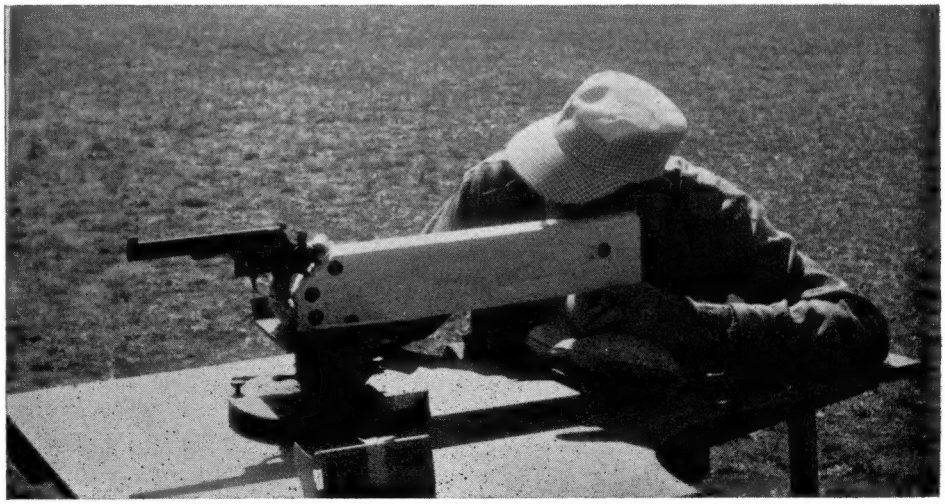
While the illustration shows the forward end of the "stock" on an adjustable pedestal, such as used for shooting a rifle from rest, such a pedestal is not necessary or even desirable. A 4 inch block of wood under the forward end of the device, with the sand bag under the rear, resting on a 2 inch block of wood, would probably give about an ideal resting system.



The revolver testing device as it appears on the rests.



One of the better groups fired at 50 yards with jacketed pistol bullets in normal .38 target load. Illustration is exact size of group.



Bill Peterson shows how the revolver testing device is shot.

Mr. Peterson later found that the soft spruce wood compressed so easily that the bolt heads gradually sunk into the wood to loosen the grip of the wood on the revolver frame, and that the bolts had to be tightened quite frequently. He turned to hard maple for a later version. It is this writer's opinion that light metal plates covering the bolted area of the stock on each side, with machine bolts through plate, and stock, would minimize this wood compression problem.

It is this writer's opinion that the device described and illustrated is a very practical one for the purpose intended, and one which is within the reach of any handgun shooter who has more than a passing interest in the accuracy of his guns and ammo.)

At the 16th Annual Redfield Smallbore Tournament in Denver, July 21st, Herb Hollister, National Senior Champion and NRA Director, set the pattern for "shorts" with his beautiful leg display. Pictured above are (front row L to R): Bob Boydston, Billings, Montana; Jimmy Williams, Denver, match winner; and Walter Kamila, Los Angeles, last year's National Smallbore Champ. Back row: Watt and Aleen Redfield, sponsors of the match; Clyde Reedy, Boulder, Colo.; Herb Hollister, Boulder, Colo., and George Stidworthy, Prescott, Arizona.

TOURNAMENT CIRCUIT

TOURNAMENT CIRCUIT
DENVER, COLORADO

Jimmy Williams of Pasadena, Calif. and Denver was grand aggregate winner of the 16th Annual Redfield Smallbore Rifle Tournament at Denver, July 30 and 31, with a 3193-243x total. Robert Boydston, Billings, Montana, was second with 3192-233; Herb Hollister, Boulder, Colorado, third with 3191-243; and George Stidworthy, Prescott, Arizona, fourth with 3190-229.

Williams won the 50 yd. iron sight with 400-37, the iron Dewar with 400-34, was second in the iron sight aggregate with 1595-114, then won the 50 yd. any with 400-38 and the any sight Dewar with 400-36.

Three shot 1600 possibles in the any sight aggregate; Hollister 1600-128, Stidworthy 1600-128, and Clyde Reedy, Boulder, Colo., 1600-124. Hollister won the 100 yd. iron with 398-23 and the 100 yd. any with 400-30. Boydston won the 50 meter iron with 399-27 and the iron sight aggregate with 1596-104. W. T. Atkinson, Prescott, Arizona, won the 50 meter any sight with a 400-35 over Herb Hollister with another 400-35 tally.

Hollister and Watt Redfield won the two-man team match with a clean 800-57, over Californians Walter Kamila and Bill Grater with 799-61.

OREGON HIGH-POWER CHAMPIONSHIPS

The Oregon State High Power Rifle Championships were fired 30-31 July at Redmond. The range was filled to its capacity of 80 competitors from Oregon, Washington and California. Weather conditions throughout the match were moderate except for a short and spectacularly violent rain-and-hail storm early in the afternoon of the second day which drove contestants and range personnel alike to the shelter of their cars.

Winner of the grand aggregate and state champion was Lt. Don Jacobson, USMCR, of Portland, with a 686-75V out of a possible 700. It will be recalled that Jacobson still holds the Navy Cup Match record at Camp Perry with a 100-15V.

Second place went to R. B. Green of the Sixth Army Rifle Team with a 686-70V, and third to Earl Burton of Vacaville, California, with a 681-75V.

Place winners in individual matches were:

The Blackington Trophy Match (20 shots offhand); R. B. Green 97-8V, R. Hennon, Canyon City, Ore., 96-8V, R. Smith, Newberg, Ore., 96-8V.

The White Trophy Match (200 and 300 yd. rapid fire); George Clapp, Bend, Ore., 100-16V; Earl Burton 100-14V; Robert Knotts, Portland, Ore., 100-13V.

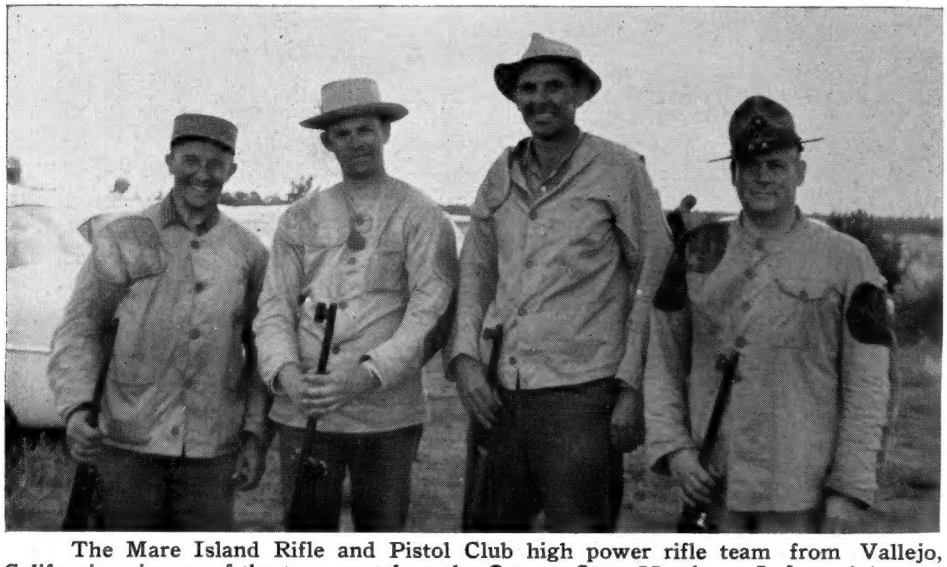
The Sloan Trophy Match (20 shots at 600 yds.); Don Jacobson 100-13V; Don Jones, Dixon, Calif., 100-11V; R. B. Green 100-11V.

The Governor's Trophy Match (10 shots offhand at 200 yds., 10 shots at 300 yds. rapid fire and 10 shots prone at 600 yds.); Albert Turnell, 6th Army Rifle Team, 148-15V; Earl Burton 148-11V; R. B. Green 147-15V.

The Royce Trophy Match (20 shots at 800 yds. on the B target); R. W. Ickes, Berkeley, Calif., 97-11V; Sidney Comfort, Idlewyld Park, Ore., 97-11V; Don Jones 96-7V.

In the four-man team match fired over the National Match course, the Mare Island Rifle and Pistol Club from Vallejo, Calif., nosed out the 6th Army team, which was participating in the Oregon matches enroute to Camp Perry, by a score of 977-110V's to 977-107V's. Firing members of the California team and their scores were: Emmanuel Schwab, Sacramento, 246-24V, Raymond W. Ickes 245-29V, Don Jones 244-27V and Earl Burton 242-30V.

Raymond Ickes



The Mare Island Rifle and Pistol Club high power rifle team from Vallejo, California, winners of the team match at the Oregon State Matches. Left to right are: Emmanuel Schwab, Donald Jones, Earl Burton, and Raymond Ickes.

CONNECTICUT HIGH-POWER MATCH

Twenty-nine fired NRA Match Rifle and thirty-eight the M-1 service rifle in a Camp Perry Warm-Up Match on Blue Trail Range, August 7th. Slow fire standing and both sitting and prone rapid fire were fired at 200 yards, plus a 20 shot prone match at 600 yards.

Al Mason from New Haven defeated Martha Ventres from Stamford by a single V in the match rifle grand aggregate (Mason 381-27V to Ventres 381-26V). Fred Willing from Long Island City, N. Y., topped the service rifle shooters with 387-30V, followed by Connecticut shooters H. L. Slocum 386-22V, H. Perry Smith 385-26V and E. H. Ebdon 383-19V.

In the match rifle division, Ron Dornau, Bayside, N. Y., won the standing match with 95-6V; Robert Carroll, Greenwich, Conn., the sitting rapid fire with 100-4V; Al Mason the prone rapid fire with 98-6V; and John Ventres, Stamford, the 600 yd. prone with 100-15V.

With Service rifle, Fred Willing took the standing match with 97-4V; H. Perry Smith the sitting rapid fire with 100-6V; H. L. Slocum the prone rapid fire with 99-8V; and E. H. "Bud" Ebdon the prone match with 99-13V.

VERMONT STATE SMALLBORE CHAMPIONSHIP

Two junior shooters, Charles W. Hoy from Arlington, Virginia, and J. Eric Sundstrom, Jr. from Glen Ridge, New Jersey, topped the 74 competitor field for aggregate honors in the Vermont State Smallbore Rifle Championship matches, fired on the Prosper Rifle Club range near Woodstock, August 28th. Hoy won the open championship with 1597-95 and Sundstrom was runner-up with 1595-117, for the 50 yd. and 100 yd. matches with each iron and any sights.

Carl Boyington, Bangor, Maine, was third with 1595-114; Ester Smith, Keene, N. H., fourth and high lady with 1594-100; and Joseph Diaz, Jr., Bridgeport, Conn., fifth with 1593-94. Charles Langmaid, Brattleboro, Vt., won the resident state championship with his 1589-89, one point and one X up on John Hollar of Bellows Falls.

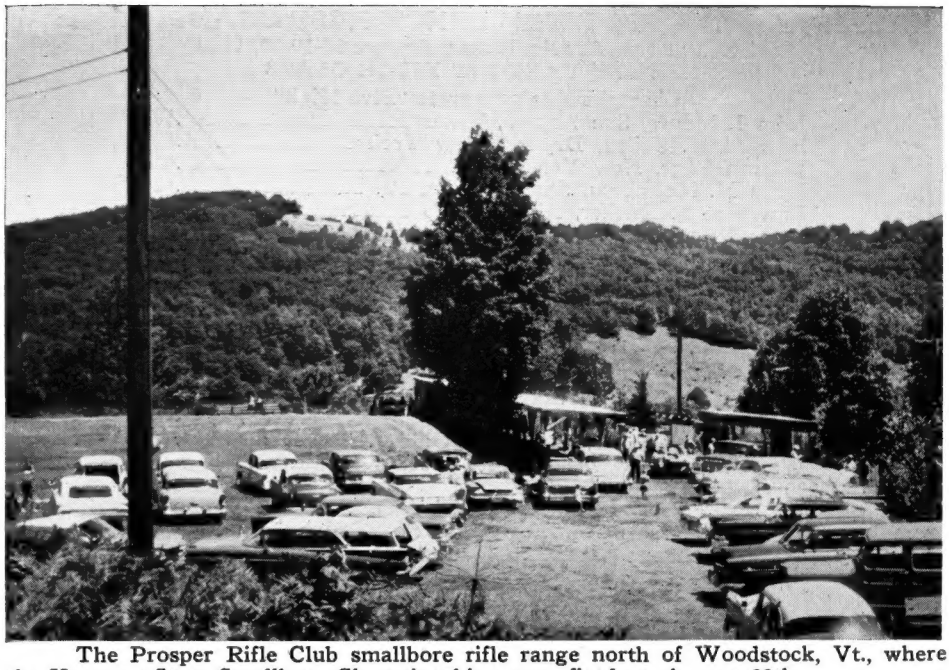
A regular annual feature of this tournament is a 20 shot offhand match at 100 yards with any sights, and an aggregate of this offhand match and the any sight 100 yard prone match, with rotating trophies to high Vermont resident in each match.

John Ring from Brookline, Mass., won the offhand match with a 189-3 tally. Hoy was runner-up with 188-2, Sundstrom third with 186-4; Henry Peck, Ballston Spa, New York, fourth with 186-3; and Langmaid with another 186-3 the high resident and winner of the John Hollar Trophy.

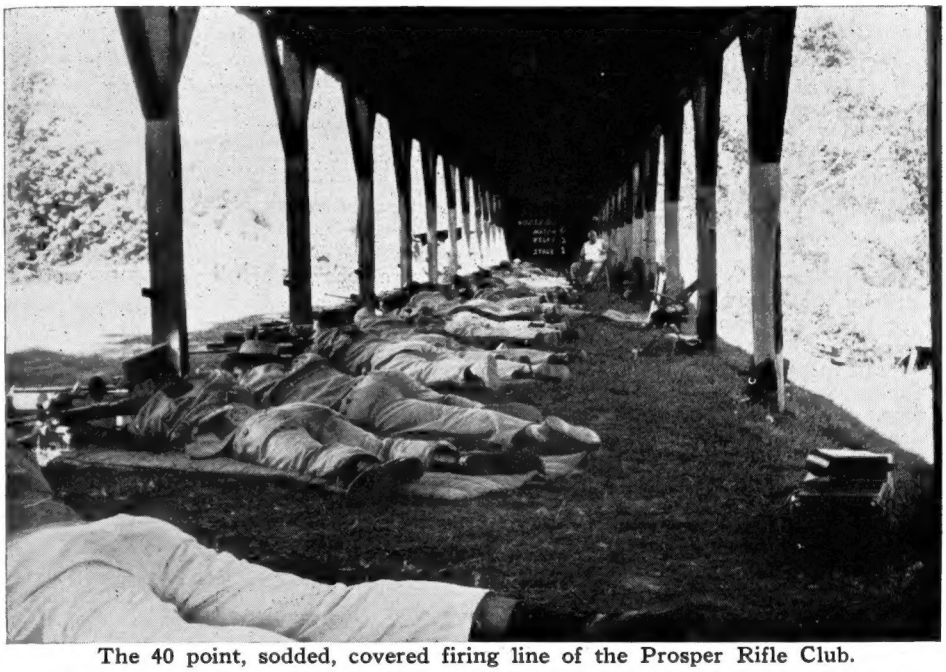
Hoy won the offhand-prone aggregate with 588-26 and Langmaid was runner-up and winner of the State Association Cup with his 586-28 score. Sundstrom was third with 585-35; Richard Wong, Burlington, Mass., was fourth with 585-22; and Robert W. Howe, Brattleboro, Vt., fifth with 584-34.

Boyington with 400-30 beat John Hollar's 400-27 in the 100 yd. any sight match. Joe Diaz with 399-19 beat the 398-28 by Richard Leiterman from Chaumont, N. Y. at 100 yds. with iron sights. Sundstrom with 400-25 beat the 399-28 by Boyington in the 50 yd. iron sight event, and his 400-38 in the 50 yd. any sight beat the 400-36 by Herbert Laird from Nutley, New Jersey.

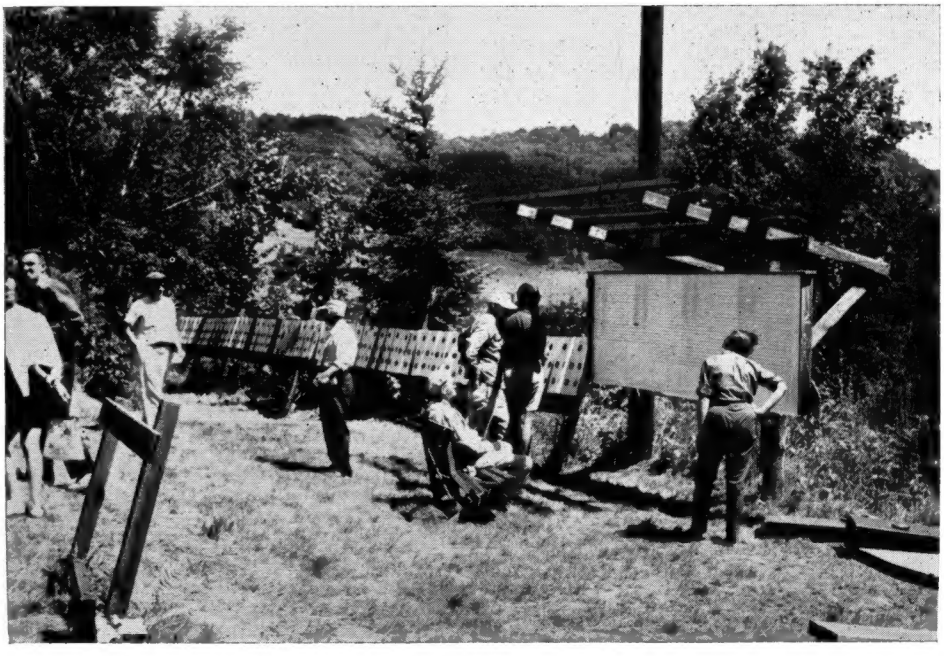
The weather was fine. Cool enough for sweaters and jackets to be comfortable in the morning, the bright sun brought the temperature up to a point where the shade of the covered firing line was welcome by mid-day. Only very light breezes, which did fish-tail a bit at times, resulted in average higher than normal scores on this excellent but often "sporty" range—a total of twenty-one 400 possible scores were fired in the 50 yd. any sight match, the final match of the day.



The Prosper Rifle Club smallbore rifle range north of Woodstock, Vt., where the Vermont State Smallbore Championships were fired on August 28th.



The 40 point, sodded, covered firing line of the Prosper Rifle Club.



The Information Bench

The Information Bench service is available to all Precision SHOOTING readers. With your questions, send a stamped, self addressed return envelope for a reply. Selected questions and answers, covering as wide a variety of interests as possible, will be published in these columns. Address your questions to the following people.

Rifles, all types, accessorise, handloading, components and shooting methods:—**R. W. Lathrop, The Information Bench, 3207-148th Ave. S. E., Bellevue, Washington.**

Sporting handguns and loading—**Kent Bellah, Saint Jo, Texas.**

Questions: 1) Is hard fouling and ringing of the bore by peening an effect produced mainly by Ball type C powder? Do other Ball types do these two things?

(Continued on Page Twelve)

NATIONAL VARMINT RIFLE BENCH REST CHAMPIONSHIPS

Fired at San Angelo, Texas, August 18-19-20, 1960

HEAVY VARMINT RIFLE CLASS

Championship aggregate "Five High"

John I. Moore, San Angelo, Texas ..... .507
Edward M. Shilen, Dryden, New York ..... .524
Warren Page, New York City ..... .616
Irven M. Mohnkern, State College, Pa. ..... .624
Lawrence S. Rucker, Akron, Ohio ..... .634

100 yard aggregate		200 yard aggregate	
Edward M. Shilen	.343	John I. Moore	.595
Bruce Pheasant, Buffalo, Wyo.	.386	Irven M. Mohnkern	.650
John I. Moore	.420	Edward M. Shilen	.705

LIGHT VARMINT RIFLE CLASS

Championship aggregate "Five High"

Paul O. Gottschall, Salem, Ohio ..... .636
Irven M. Mohnkern, State College, Pa. ..... .648
H. B. Reagan, Big Spring, Texas ..... .712
Eugene L. Beecher, Cleveland, Ohio ..... .772
Warren Page, New York City ..... .796

100 yard aggregate		200 yard aggregate	
Warren Page	.569	Paul O. Gottschall	.646
C. A. Morris, Abilene, Texas	.598	Irven M. Mohnkern	.695
Irven M. Mohnkern	.602	H. B. Reagan	.785

SPORTER RIFLE CLASS

Championship aggregate "Five High"

R. L. McLaren, Abilene, Texas ..... .944
Lawrence S. Rucker, Akron, Ohio 1.029
H. B. Reagan, Big Spring, Texas 1.081
Warren Page, New York City 1.303
Frank Metting, Kerrville, Texas 1.408

100 yard aggregate		200 yard aggregate	
Paul O. Gottschall	.672	Lawrence S. Rucker	1.013
R. L. McLaren	.865	R. L. McLaren	1.024
Warren Page	.902	H. B. Reagan	1.218

Smallest groups fired at 100 yards

Heavy Varmint Rifle: Edward M. Shilen ..... .195 inch
Light Varmint Rifle: C. A. Morris ..... .410 inch
Sporter Rifle: Paul O. Gottschall ..... .470 inch
(All aggregates are in minute-of-angle)

The entry for this first National Varmint Rifle Championship Meet, sponsored by the Texas Bench Rest Shooters Association and fired on the San Angelo Gun Club Range, was somewhat disappointing in point of numbers but the distribution of contestants was national in scope. Of the total twenty-five shooters, thirteen were from Texas, four from Ohio, three from New York, two from California, and one each from New Mexico, Pennsylvania and Wyoming.

Seventeen of the shooters competed in the Heavy Varmint Rifle class matches for the GUN DIGEST TROPHY and other awards as well as the "National Champion" title. GUN DIGEST editor John Amber was present as an observer and to make the first presentation of the GUN DIGEST TROPHY to the champion, John I. Moore.

Sixteen competed in the LIGHT VARMINT Rifle Class matches for the SAN ANGELO CUP and the Light Varmint Rifle Championship title.

Ten competed in the SPORTER RIFLE Matches for the JOHN I. MOORE TROPHY. Since no official course of fire had been approved for national competition in the Sporter Rifle class, these matches did not constitute a national championship.

The shoot sponsors awarded a silver cup to the competitor who fired the smallest group in each of the three classes. The National Bench Rest Shooters Association awarded tie medallions to match and aggregate winners.

All matches in all classes were of five record shots. Aggregates consisted of five 5-shot matches at 100 yards, five 5-shot matches at 200 yards, and the average of the combined two range aggregates for the grand or National Championship aggregate.

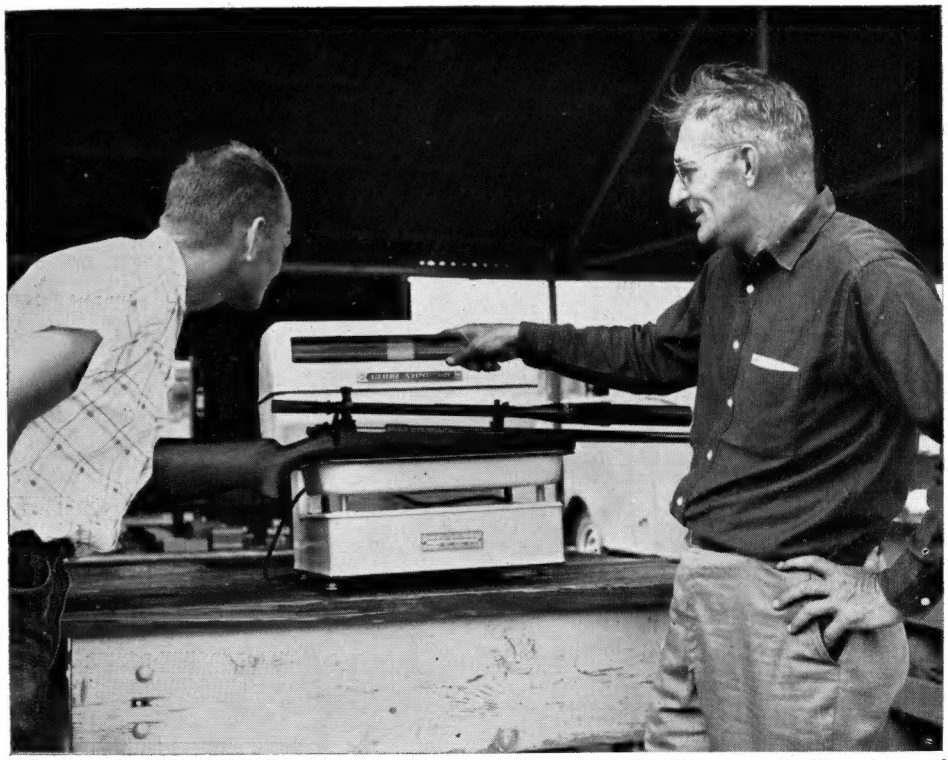
Weather is reported warm with generally overcast sky on the first day and cloudy-bright on the succeeding two days. The gusty, fast shifting winds and mirage for which this San Angelo range is famous prevailed through all three days. Under these conditions the fine aggregates made with these light rifles is especially note-worthy.

On Friday evening Mr. and Mrs. John I. Moore entertained the competitors and visitors with a barbecue at their ranch near San Angelo.

EQUIPMENT: In the Heavy Varmint Class, all but two of the seventeen shooters used rifles of .22 caliber. Champion John I. Moore shot the .222 Rem. cartridge in one of the new Remington 40X rifles, and Warren Page used the .222 Magnum in a Hart barrel on the Remington 40X action. Ed Shilen shot a .222 Rem. cartridge in a Hart barrel fitted to the action he made himself. Irv Mohnkern shot a Tayior & Robbins built .219 Don in an Apex barrel on Mauser action, and "Cowboy" Rucker shot a .222 in Hart barrel on a GOW action. Bruce Pheasant used a .222 in Douglas barrel on Weber action. All of those who placed in the aggregates shot their own hand swaged bullets, most of them made in B & A dies.

In the Light Varmint Class the .22 caliber still predominated, but two shot a 6 m/m cartridge and one a .270. The Champ in this class, Paul Gottschall, shot his 6 m/m in Douglas barrel on Weber action. Mohnkern shot a .222 SAKO with Taylor & Robbins tuneup, and H. B. Reagan shot a .222 in Remington factory gun. Beecher shot a .222 Magnum in Douglas barrel on SAKO action, and Page a .222 in Apex barrel on SAKO action. Gottschall and Mohnkern shot hand swaged bullets from B & A dies, Beecher shot hand swaged bullets made by W. M. Brown, Reagan used Sierra 53 gr. bullets, and Page shot Speer 52 gr. bullets.

The 6 m/m family of cartridges predominated in the Sporter class. Winner McLaren shot an 8¼ pound outfit of Winchester Model 70 rifle and Weaver 6X scope in .243 caliber, with a load of 40 grs. 4380 powder and Sierra 75 gr. bullet. Rucker shot a .243 in a rifle right up to the 10½ pound weight limit with his Unertl 8X scope. Reagan shot the .244 Rem. in a Titus barrel on Rem. 722 action with load of 37 grs. 3031 and Sierra 60 gr. bullet. Page shot his own "baby," the .240 PSP, in Apex barrel on BSA action, the rifle with 8X Leopold scope weighing in at 7 pounds 14 ounces, and shooting a load of 41½ grs. 4064 with the Sierra 75 gr. bullet.



All competitors' rifles were carefully weighed at the San Angelo Varmint and Sporter Rifle championships. Irv Mohnkern shows a spectator how it's done.

1960 NATIONAL BENCH REST RIFLE CHAMPIONSHIPS
CHAMPIONSHIP AGGREGATE "TOP TWENTY"

H. L. Culver, Silver Spring, Maryland	.6004
Robert Hart, Nescopeck, Pennsylvania	.6630
Robert Smith, Dallas, Texas	.6652
L. E. Wilson, Cashmere, Washington	.6663
Ferris Pindell, Richmond, Indiana	.6685
Omar Rinehart, Salem, Ohio	.6709
Ted Holmes, Mattoon, Illinois	.6872
John Hart, Clarksburg, West Virginia	.6984
Paul O. Gottschall, Salem, Ohio	.6985
John Hutchinson, Belle, Vernon, Pennsylvania	.6995
L. F. Carden, Kansas City, Kansas	.7050
Robert Stinehour, Newburgh, New York	.7427
Horace E. Powers, Okmulgee, Oklahoma	.7541
Ferris Heffington, Corpus Christi, Texas	.7561
Dr. H. E. Parker (?)	.7586
Clyde Yockey, Apollo, Pennsylvania	.7657
Gerald Wilkinson, Cedar Falls, Iowa	.7688
Alfred Walter, St. Louis, Missouri	.7703
Irven M. Mohnkern, State College, Pennsylvania	.7948
William M. Starks, Dodge City, Kansas	.7969

(Aggregates are "minute-of-angle" averages)

100 yard aggregate stage

Ferris Pindell	.3986
Ted Holmes	.4011
Omar Rinehart	.4026
L. E. Wilson	.4308
Dixon Herman (Neb.)	.4352

200 yard aggregate stage

Robert Hart	.7444
H. L. Culver	.7539
Robert Smith	.7819
John Hutchinson	.8113
John Hart	.8243

Seventy-six competitors, representing all regions of the U. S., participated in the unrestricted rifle National Bench Rest Championships, fired on the John Zink Rifle Range near Tulsa, Oklahoma, August 23-24-25, 1960, and conducted by the Tulsa Bench Rest Rifle Club under sponsorship of the NBRSA Mid-Continent Region.

Tuesday, Aug. 23rd, was given over to "warm-up" matches in preparation for the championship competition the following two days. Shooting conditions are reported to have been the best of the three days for this preliminary competition. We do not at this time have any report of the results of this day's shooting.

On Wednesday, for the shooting of the 100 yard stage of the championship course, conditions started getting rougher. The wind was not strong, but was switching constantly and horizontal groups were in evidence all up and down the line. The temperature was pretty high, and the humidity was terrific. Big storm clouds moving toward the range from the north made the range crew fearful of a storm, so all efforts were made to get the last two matches finished before the rain struck. Ahead of the storm the wind died drastically and the last two matches fired at 100 yards were shot in a comparative calm, as contrasted to the previous three. The groups were evidence of this condition. Shooting was over about 2 P. M.—and the storm never did break.

Thursday, for the 200 yard stage of the championship course, was clear. The clouds of the previous day were gone—but not the switching winds; if anything they were a little stronger. Conditions never did change this day—the switching wind continued right through the last match. And conditions were such that a winner couldn't be determined until the last match had been fired. It was too easy to get lost, and even the leaders could drop one.

Generally, for the entire three days, the prevailing wind was from the southeast. The switch came when the wind shifted to the south; and even, at times, to the southwest. The troublesome thing was that the switch often occurred several times during each match.

M. D. "Bud" Waite was on the job as reporter for the National Rifle Ass'n. Fred Huntington of R. C. B. S. was present with a good exhibit of his products and one of his employees, Dale Strawn, was a competitor.

The several improvements at the range for personal comfort and convenience which had been made since the 1958 matches were appreciated by all, and especially by those who camped at the range.

(Editor's note: We do not at this writing have details on either shooting statistics or equipment used by the shooters. A following resume will be made when those details are available.)

Bench Rest Match Reports

PLAINFIELD, NEW HAMPSHIRE

National Match Course Aggregate

Robert W. Hart	.4417
J. M. Reece	.4650
A. K. Glendening	.4845
Crawford H. Hollidge	.4885
Charles Kingsley	.5015

100 yard aggregate

Robert W. Hart	.347
Mary U. Hollidge	.399
Ralph Felter	.402

200 yard aggregate

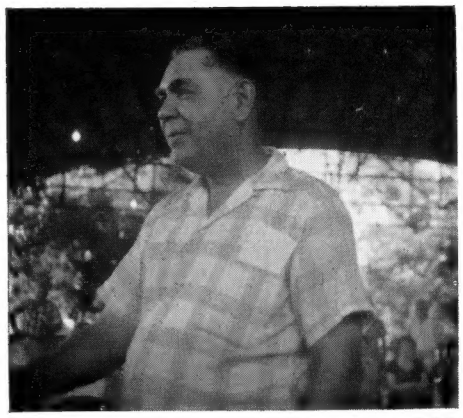
J. M. Reece	.513
A. K. Glendening	.527
Crawford H. Hollidge	.533

Twenty-two fired the five 10-shot matches at 100 yards on the Plainfield Rifle Club's range on Saturday afternoon, July 16th, under a bright sunny sky, with normal mid-summer temperature and light breezes. Almost half (10) of the 100 yard aggregates were under half inch average, and only four of the total were over .600".

Sunday turned up a lightly overcast sky for the 200 yard shooting, but still warm with only light breezes. While, with the exception of one match, it took under half-minute-of-angle groups for a spot in the match prize list, there were no under-half-minute-of-angle aggregates made. However, over half (10 again) of the 18 who completed the 200 yard aggregate averaged under .600 MOA.

The Hollidges made a clean sweep of the special awards provided by the Plainfield Rifle Club; Crawf taking the $10.00 award for smallest aggregate for the first match at each the 100 and 200 yard stages, and Mary took the special $5.00 awards for smallest group in the last match at each 100 and 200 yards. Harriet Smith, home on vacation at Roxbury, N. Y., fired the smallest group in the last 200 yard match (.790 inch) but evidently was not competing for prize awards.

Ralph Felter shot the smallest 10-shot group at 100 yards (.275 inch) and Crawf Hollidge the smallest at 200 yards (.635 inch).



1960 National Bench Rest Rifle Champion, Homer L. Culver, Silver Spring, Maryland.

RICHMOND, CALIFORNIA

On August 14th the Richmond Rod and Gun Club held an unregistered bench rest match to test out their new 12 bench range and provide some advance training in shoot operation for club members in preparation for the California Bench Rest Championships, which they will hold on this range October 15th and 16th.

Sixteen shooters participated, three of them driving down from Yreka in the north end of the state, a distance of some 350 miles. Approximately a third of the shooters were new to formal bench rest competition. The shooters were divided into two classes, according to weight of gun used; those with rifles under 12 lbs. without scope in one class, and those with rifle weighing over 12 lbs. in the other. Shooting was at both 100 and 200 yards in order to give the range and operation a complete test and workout. Only 5-shot matches were fired.

A complete statistical tabulation is not available but at 100 yards Ed Suchan of Oakland shot smallest group with light rifle (.123") and Virginia Jones from Yreka the smallest with heavy rifle (.172").

FLORISSANT, MISSOURI

National Match Course aggregate

Heavy Varmint Rifle

R. E. Davison	.561
A. J. Fruend	.566
Al Walter	.568

100 yard aggregate

R. E. Davison	.479
Al Walter	.557
A. J. Fruend	.761

200 yard aggregate

A. J. Fruend	.372
A. Fruend, Jr.	.567
Al Walter	.580

Seven shot at 9-Ring Sportsmans Club on Sunday, August 28th. Conditions were pretty good with the exception of some spotty wind and a small shower. Notice the close aggregates in the NMC aggregate and A. J. Fruend's 200 yard aggregate. Small group at 100 yards went to R. E. Davison (.280") and at 200 to A. J. Fruend's .355 inch group.

(Continued on Page Twelve)

National Bench Rest Shooters Association, Inc.

NBRSA OFFICERS AND DIRECTORS FOR 1960

EASTERN REGION:
Irven M. Mohnkern (President)
232 So. Patterson
State College, Pa.
Paul O. Gottschall (Vice Pres.)
R. D. 4
Salem, Ohio
Robert W. Hart
300 West Fourth St.
Nescopeck, Pa.

MID-CONTINENT REGION:
R. G. Berry
Pawnee, Oklahoma

NORTH CENTRAL REGION:
Walt C. Siewert
Box 749
Custer, South Dakota

GULF COAST REGION:
Robert W. Smith
6507 Lakewood Blvd.
Dallas 14, Texas

NORTHWEST REGION:
Dr. Rod Janson
606 West Galer
Seattle 99, Washington

MISSISSIPPI VALLEY REGION
Ted Holmes
R. R. #1
Mattoon, Illinois

SOUTHWEST REGION:
(Director vacancy)
Secretary-Treasurer
Bernice E. McMullen
603 W. Line St.
Minerva, Ohio

NBRSA MEMBERSHIP DUES:

Individual annual dues $5.00 (includes magazine subscription for membership term). Associate member (wife or husband, son or daughter under 18 years of age, of member in good standing—no magazine) $2.50. Life membership, $75.00. Annual club affiliation fee $10.00.

A NEW BENCH REST RECORD

Bernice McMullen has been awarded a record certificate for having set a new aggregate record of .2758 minute of angle average for five 10-shot matches at 100 yards range with unrestricted bench rest rifle. Mrs. McMullen, of Minerva, Ohio, fired the new record July 16, 1960 at Reed's Run Rifle Range in Augusta, Ohio.

The record broken was a .2903 aggregate, shot by Earl Thompson, Garden City, Michigan, on this same Reed's Run Rifle Range, August 1, 1959.

In shooting the new record, Mrs. McMullen fired a .222 Remington cartridge in a Hart barrel on Rem. 722 action with Bellows Sleeve, gunsmithed by Grant Dick. Her scope was a Unertl 24X and her load was 20.8 grs. 4198 powder, 51.5 gr. bullets made in Biehler & Astles dies and Remington primers.

In this same July 16th match at Reed's Run Rifle Range, Albert W. Johnson, Detroit, Michigan, fired another five 10-shot match aggregate at 100 yards of .2827, which also beat the record formerly held by Earl Thompson. Mr. Johnson shot a .219 Don. cartridge in Hart barrel on Mauser action. His scope was a Lyman 20X, and his load 28½ grs. Ball powder, 51 gr. bullet by Brown and Winchester primers.

ALL NBRSA MEMBERS PLEASE TAKE NOTE

(Mrs.) Bernice E. McMullen, 603 West Line Street, Minerva, Ohio, has taken over the office and duties of Secretary-Treasurer for the National Bench Rest Shooters Association, Inc., effective September 1, 1960. **PLEASE** address all future NBRSA correspondence to Mrs. McMullen at the Minerva, Ohio, address.

Mail addressed to the NBRSA at the old Lyndonville, Vermont, address will be forwarded to Mrs. McMullen and there will of necessity be several days delay in its reaching its destination.

Precision SHOOTING magazine will continue to serve as the news medium for the NBRSA, with Phil Teachout continuing as editor. Bench rest news items and information articles on any phase of bench rest shooting will be welcomed and used, and such material should be addressed directly to Precision SHOOTING, 64 Depot Street, Lyndonville, Vermont.

Robert W. Hart, 300 W. Fourth St., Nescopeck, Penna. is the newly elected NBRSA President. Bob has also been elected Director for the NBRSA Eastern Region.

Better read the foregoing again and get these changes and addresses fixed in your minds.

P. H. T.

1960 BENCH REST MATCHES

EASTERN REGION

Southboro, Mass.: Oct. 16; Southboro Rod & Gun Club, c/o J. W. Baldwin, 5 Milk Street, Westboro, Mass.

MID-CONTINENT REGION

Kansas City, Kansas: Oct. 15; Mill Creek Rifle Club, Inc., L. F. Carden, Sec'y, 2211 No. 44th St., Kansas City, Kans.

MISSISSIPPI VALLEY REGION

St. Louis, Missouri: Unrestricted bench rifle, Oct. 2; Bench Rest Rifle Club of St. Louis, James R. Ernst, Sec'y, 223 Ferncliff, Kirkwood 22, Mo.

SOUTHWEST REGION

Richmond, California: October 15-16; California State Championships, all rifle classes; contact John B. Sweany, 187-A Silverado Trail, Calistoga, California.

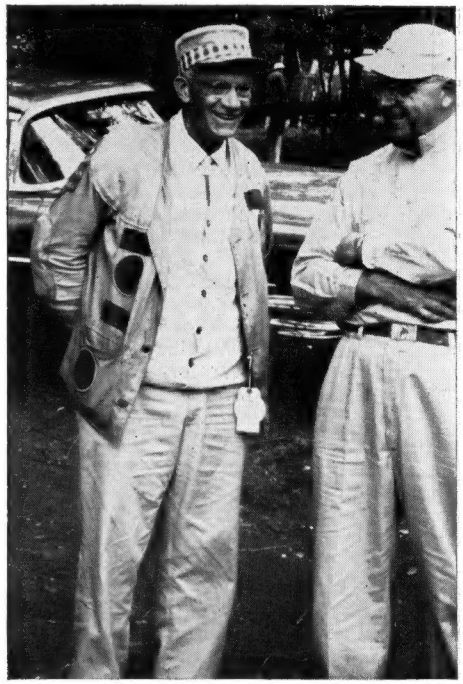
GULF COAST REGION

San Angelo, Texas: Oct. 8-9; Unrestricted rifle National Match Course; Marie Spencer, Box 1243, San Angelo, Texas.

SOUTHWEST REGION MEMBERS' MEETING

A meeting for NBRSA members resident in the Southwest Region will be held during the period of the California State Championship Bench Rest Matches, October 15 and 16, at the Richmond Rod & Gun Club, Inc. range, Richmond, California, for the purpose of electing a Director for the Region. The Southwest Region includes the states of Arizona, California, Nevada and Utah. All NBRSA members in these states, in good standing who attend this meeting are eligible to vote for Director.

THE PRESIDENT'S CORNER, in which President- elect Bob Hart plans to keep the NBRSA membership informed about their organization, including decisions of the board of directors and the reasons for the decisions, will be a regular feature of this NBRSA section in the future.



Omar Rinehart (left) of Salem, Ohio, grand aggregate winner at the Johnstown, N. Y., Labor Day bench rest shoot, chatting with NBRSA President elect, Bob Hart.

JOHNSTOWN, NEW YORK LABOR DAY BENCH REST SHOOT

Unrestricted bench rest rifles
National Match Course aggregate

Omar Rinehart	.4379
William E. Cotter	.4887
Ralph Stolle	.4954
A. K. Glendening	.4969
E. A. Smith	.5007
Robert Hart	.5108
Crawford H. Hollidge	.5202
Robert Stinehour	.5358
Lyle Heap	.5426
Cline Deere	.5501

100 yard aggregate

Omar Rinehart	.3684
William E. Cotter	.3896
Ralph Stolle	.3898
A. K. Glendening	.4020
E. A. Smith	.4324

200 yard aggregate

Lyle G. Heap	.4863
Omar Rinehart	.5075
Crawford H. Hollidge	.5092
John F. Collins	.5270
E. A. Smith	.5690

Heavy Varmint Rifle (5-shots)
National Match Course aggregate

Ross Sherman	.4549
Ed Shilen	.4847

100 yard aggregate

Ross Sherman	.3968

200 yard aggregate

Ed Shilen	.5085
Ross Sherman	.5131

When I arrived at the Pine Tree Rifle Club range just after noon on Friday the first thing I heard after stopping the car in front of the club house was the popping of rifles down on the range. Quite a fair number were already on deck and warming up the rifles for the serious shooting the next day. By late afternoon the range had the appearance of a good sized match already under way.

Friday was a brilliant sunny day, but with quite strong winds and temperature on the real cool side. Some of the competitors who camped on the range were complaining Saturday morning of hav-

ing spent a **cold** uncomfortable night.

Saturday, for the 100 yard shooting, was another sparkling bright sunny day, but with only the lightest of winds and a warming trend; a perfect day for spectators and one the shooters could find little fault with other than some mirage trouble. Groups and aggregates by the better shooters were very good, but there were still many targets posted on the "wailing-wall" that must have been sad disappointments to their makers.

The "Old Timers Banquet," served in the dining hall of the Pine Tree Rifle Club's club house, was a great success, insofar as attendance was concerned and quality of the meal. Apparently the greater part of the 63 competitors, their wives who were at the shoot, plus observers and visitors, were at the tables. But the real old-timers, other than those who regularly attend these shoots, were very few in number. No more than a half dozen who attended the first Johnstown Shoot in 1947 were present this year.

Following the banquet, the Eastern Region bi-annual meeting and election of Directors was held. Robert Hart, Nescopeck, Pa., was elected Director for the Region and Brunon Boroszewski, Buffalo, N. Y., was elected Deputy Director for the Eastern Seaboard division. A Deputy Director for the Great Lakes division will be elected at a later meeting in that area.

A steady drizzle of rain greeted the shooters Sunday morning and continued until the 200 yard matches were well under way. The rain stopped by midmorning but the sky continued overcast throughout the day, with only light winds and a comfortable temperature. As was the case on Saturday, the better shooters turned in consistently excellent groups and aggregates.

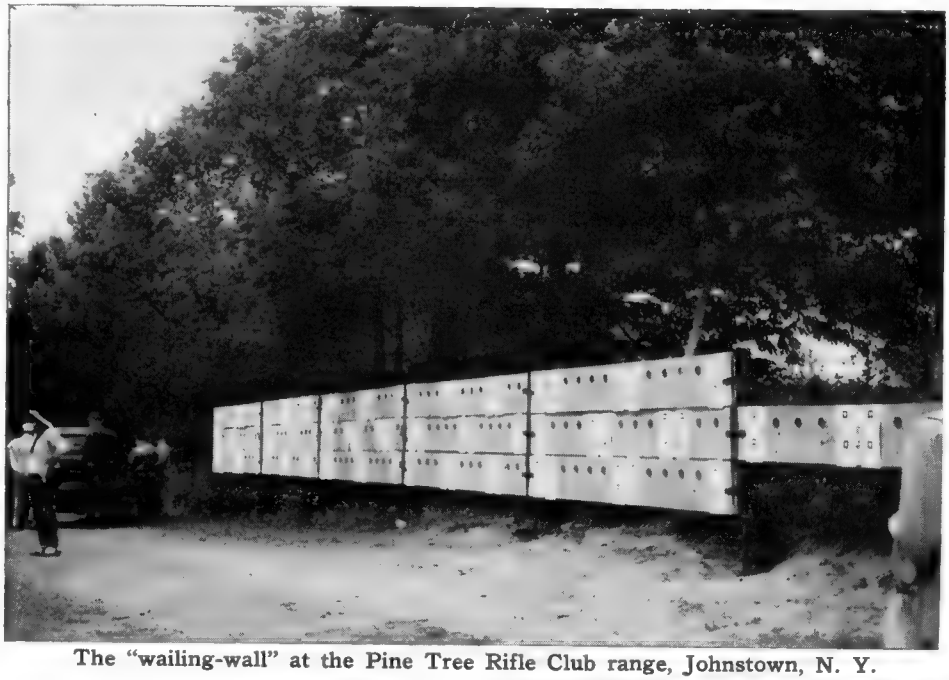
The accuracy of the heavy varmint class rifles (13½ lbs. max. weight of rifle and scope), as demonstrated by the more experienced shooters of this class of rifles, was a surprise to many of those in attendance at the shoot. It will be noted that winning 5-shot match aggregates with the light rifles compare very favorably with the winning 10-shot match aggregates made with the heavy bench rifles; and the ratio of light rifle shooters to heavy rifle shooters was approximately 1 to 4.

There were two relays of heavy rifle shooters and one relay for the varmint rifle shooters, so, except for those few who shot in both classes, the pace of the shoot was leisurely and comfortable, with time for visiting as well as shooting. As is normal at Johnstown, the entire match operation was "tops."

One always expects to see something new at the Johnstown shoots, and there was no disappointment on that score this year. Friday afternoon, Emory Tooly was shooting his new .45-70 bench rest rifle; a full-fledged bench rest rifle chambered for the standard .45-70 cartridge. The rifle shot very well but Emory didn't shoot it in the matches; and small wonder, since the hard-to-get factory bullets cost 12 cents each and a satisfactory powder for the cartridge is hard to get. But Emory was bending Ray Biehler's ear about bullet swages and no doubt we'll be hearing more about this gun in the future.

Brunon Boroszewski started shooting with his .308 rifle mounted on a brand new solid aluminum stock, with scope blocks mounted on the side of the stock instead of on the barrel. The unproven innovation didn't measure up to Brunon's "High Hopes" and before the matches were over he had his good .308 back in the patched-up old Mauser stock.

Drawing bench assignments at the range officer's stand in preparation for the start of the Johnstown, N. Y., bench rest matches.



The "wailing-wall" at the Pine Tree Rifle Club range, Johnstown, N. Y.

Gene Beecher can be pretty well depended on for something "different," and this year it was his king-size, muff-style ear protectors, which have been advertised lately. They do look "unusual" but if they do the job claimed for them we'll no doubt be seeing more of them on the firing lines in the future. And it was Gene instead of Cline Deere who was using the golf cart to transport his rifle to and from the benches at this shoot.

While attendance was a bit on the light side this year, perhaps partly due to a number of quite regular competitors having only recently made the long trip to the Nationals in Tulsa, it was a good shoot and a fine meeting for some few of us who didn't do any shooting.

If you couldn't make the Johnstown Shoot this year, better start planning right away to get there for the National next year—come Hell or high water.

P. H. T.

Bob Stinehour at bench 48 on the Pine Tree Rifle Club range at Johnstown, N. Y., 1960. This is Bob's third bench rest match since leaving the hospital following an auto accident in early July in which he sustained a broken hip and other injuries.

Bench Rest Match Reports

(Continued from Page Nine)

BUFFALO, WYOMING

National Match Course Aggregate

Unrestricted rifles

I. F. Jack Williams	.47695
Bruce Pheasant	.48130
Robert Rowland	.48845
L. E. Wilson	.50335
Frank Minucci	.52295

100 yard aggregate

Bruce Pheasant	.3746
I. F. Williams	.4284
Robert Rowland	.4425

200 yard aggregate

Harold Bing	.4894
I. F. Williams	.5255
Robert Rowland	.5344

Heavy Varmint Rifle

100 yard aggregate

Bruce Pheasant	.4630
L. E. Wilson	.5608
Harold Bing	.5736

200 yard aggregate

Bruce Pheasant	.6823
I. F. Williams	.7122
C. C. Hankins	.8254

Grand aggregate

Bruce Pheasant	.5726
L. E. Wilson	.7121
Harold Bing	.7154

Although the attendance at the annual Mid-Summer Shoot of the Buffalo Outdoor Rifle Club, July 16-17, was small in numbers (14), it represented a wide territory. Five were from Wyoming, three from California, two from Arizona and one each from Idaho, Montana and Washington.

The Heavy Varmint Rifle 5-shot matches were fired in the afternoons of each day while the unrestricted rifles were fired in the evenings under lights. This more difficult shooting condition for the light rifles should be taken into consideration when comparing the aggregates.

CUSTER, SOUTH DAKOTA

National Match Course aggregate

Unrestricted rifles

Clair Hollingsworth	.6250
I. F. Jack Williams	.6487
Harold Bing	.6495

100 yard aggregate

Clair Hollingsworth	.511
Harold Bing	.547
G. R. McGiffin	.593

200 yard aggregate

Jack Williams	.708
Clair Hollingsworth	.739
Harold Bing	.752

Heavy Varmint Rifle

100 yard aggregate

Bruce Pheasant	.482
Jack Williams	.582
Clair Hollingsworth	.641

200 yard aggregate

Bruce Pheasant	.491
Jack Williams	.7095
Harold Bing	.7375

Grand aggregate

Bruce Pheasant	.4863
Jack Williams	.6457
Harold Bing	.7102

Sporter Rifle 100 yard aggregate

Carl Sands	.756
Jack Williams	.781
Otto Filbrandt	.823
Owen Hollingsworth	.826

200 yard aggregate

Harold Bing	.904
Carson Teaney	.945
Willard Lange	.950
Owen Hollingsworth	.960

Grand aggregate

Jack Williams	.875
Owen Hollingsworth	.893
Clair Hollingsworth	.921
Otto Filbrandt	.923

Nine shot the unrestricted bench rifle and heavy varmint rifle while thirteen shot in the Sporter rifle class at Custer on July 30 and 31, in pleasant weather except for a bothersome switching wind. Five-shot matches were fired with the Varmint and Sporter rifles.

RENTON, WASHINGTON

Unrestricted bench rest rifles

National Match Course aggregate

L. E. Wilson	.4057
Dr. Rod Janson	.5148
Ray Speer	.6085
Roy Meister	.6560

Heavy Varmint Rifle

National Match Course aggregate

Manley Oakley	.5093
E. Fromback	.5810
Allen Bench	.6268
Roy Meister	.6560

Ten shot unrestricted bench rifle and twelve shot heavy varmint rifle in the Seattle Precision Shooters match, fired on the Renton Fish and Game Club range, July 30-31. Roy Meister, club secretary, won the combined unrestricted and varmint rifle aggregate with a .656 minute-of-angle average. Ray Speer was right behind him with .661.

KANSAS CITY, KANSAS MID-CONTINENT REGIONAL SHOOT

Unrestricted bench rest rifles

National Match Course aggregate

H. E. Powers (Okla.)	.4687
L. F. Carden (Kans.)	.4727
W. C. Farrar (Texas)	.4934
V. S. Horstmeyer (Kans.)	.5303
Larry Englebrecht (Kans.)	.5330

100 yard aggregate

L. F. Carden	.337
H. W. Barton (Kans.)	.382
W. C. Farrar	.397

200 yard aggregate

H. E. Powers	.5165
W. C. Farrar	.5895
L. F. Carden	.6085

Only eleven competed in the Mid-Continent Regional Championship shoot at the Mill Creek Rifle Club Range, August 6, in a temperature close to 100 degrees. Conditions were good for the 100 yards shooting but troublesome winds plagued the shooters during the 200 yards stage.

SOUTHBORO, MASSACHUSETTS

Unrestricted bench rest rifles

Grand aggregate

Crawford H. Hollidge	.3825
Robert Stinehour	.3935
Mary U. Hollidge	.4595
Charles Kingsley	.5170
Paul Stahl	.5730

Fifteen shot an aggregate of five 5-shot and five 10-shot matches, all at 100 yards, on the Southboro Rod and Gun Club range, August 14th. Shooting conditions were near perfect, with overcast sky and only the lightest of breezes.

Oldtimer Andy Brower led off in the first match fired with the smallest 5-shot group to be fired, a .210", and Mary Hollidge was second in that match with the second smallest 5-shot group—.230". Bob Stinehour shot the smallest 10-shot group—.265", and Crawf Hollidge won the next 10-shot match with a .280" group.

WINDSOR, ILLINOIS

Unrestricted bench rest rifles

National Match Course aggregate

Ted Holmes	.403
James Shepler	.449
Harold Cole	.452
Ernest Detmer	.479

100 yard aggregate

Ted Holmes	.308
James Shepler	.400
Ernest Detmer	.415

200 yard aggregate

Harold Cole	.478
Ted Holmes	.498
James Shepler	.498

Nine competed in the night shoot at the Windsor Rod and Gun Club range August 6th. James Shepler shot smallest 100 yard group (.215) and Roy Blumenshine the smallest at 200 yards (.610 inch).

ST. LOUIS, MISSOURI

Missouri Varmint Rifle Championship

Heavy Varmint Rifle

	100	200	NMC
R. E. Davison	.536	.445	.491
Alfred Walter	.506	.544	.525
William Schellert	.611	.486	.549
Robert Gross	.594-3rd		
Barbara Schellert		.530-3rd	

Light Varmint Rifle

A. J. Freund	.885	.686	.786
R. E. Davison	.839	.914	.877
Otto Filbrandt	.990	1.152	1.071
Col. T. Whelen	.988-3rd		

Eleven shot heavy varmint rifle and seven the light varmint rifle on the Bench Rest Rifle Club of St. Louis range, August 14th, for the Missouri State Championships.

EASTON, OHIO

Unrestricted bench rest rifle

10-shot matches

National Match Course aggregate

Clarence Aumiller	.4409
Clyde Yockey	.4449
Omar Rinehart	.4787
Bernice McMullen	.5091
Paul Gottschall	.5139

100 yard aggregate

Omar Rinehart	.4410
Clyde Yockey	.4578
Paul Gottschall	.4676

200 yard aggregate

Clarence Aumiller	.4040
Clyde Yockey	.4321
Omar Rinehart	.5165

FIVE SHOT MATCHES

Grand aggregate

Paul Gottschall	.3369
Harold Haynam	.3447
Clarence Aumiller	.3466

100 yard aggregate

Paul Gottschall	.2820
Albert Johnson	.2912
Omar Rinehart	.3302

200 yard aggregate

Clarence Aumiller	.3062
Harold Haynam	.3365
Clyde Yockey	.3508

Sixteen fired in the Chippewa Rifle Club shoot at their Easton, Ohio, range on August 6 and 7.

End of official National Bench Rest Shooters Association, Inc. section.

The Information Bench

(Continued from Page Seven)

Which ones? Do Ipco wads aid in reducing the fouling of Ball type C?

2) My Hollywood loading tool has one failing. All calibers using large primers give primer seating trouble. Most times, regardless of how the tool is handled, the primers are left too high, requiring an extra "bump." What do I look for?

Comment—no more questions: I have read Precision Shooting for several years. It is enlightening and interesting. My sole bench activity consists of testing chuck rifles and loads. However, the latest issue tells of an accurate .30 cal. bench rest job. I wonder if you bench rest shooters aren't missing a chance to

expand by using the **most accurate cartridges.** Why not work on the others in competition? In other words, have matches for a certain bore size or a certain cartridge. Then you would find out what .270's, .30-06's, .375's, .45-70's would do at their best. Frank A. Evendon, New Jersey.

Answer: (supplied by M. H. Walker) 1) As far as I know all ball powders have the same characteristics. Reports are conflicting on these powders. The Ordnance people say the barrels last longer with ball powder.

2) Wads generally help to reduce fouling. You will need to try them to find out in your particular rifle.

3) Neither the Hollywood nor any other tool of this type is designed for seating primers. The leverage is wrong. The Hollywood has some adjustments which are hardly ever set properly in addition. I use a separate small tool made especially for priming.

4) The Sporter Rifle class at Bench Rest requires the use of calibers 6 m/m or larger. Many calibers are seen on the line. I knew of one shooter who is working on a .45-70.

Question: I have a nice Smith & Wesson K-22 I plan to have converted to one of the Harvey Kay-Chuk cartridges. Ballistics seem nearly similar. Which would you prefer? Don Holmes, North St. Paul, Minn.

Answer: When the original Kay-Chuk (K-Hornet) came out it was a real sensation, and certainly "the most" in a .22 centerfire. Harvey's later Kay-Chuk Standard proved to be about as efficient ballistically with the current loads that have been developed, and you get this efficiency with less powder and without loss of accuracy. Another advantage, if you call it that, the Standard will handle the entire line of Sisk REVOLVER bullets in 37, 45 and 50 grain, as the case has a longer neck. It will also handle rifle bullets of up to 50 grain weight (which the original Kay-Chuk will not).

On that basis, I'd certainly take the Kay-Chuk Standard. You can convert either the regular .22 L. R. or the .22 WMR Smith & Wesson K-22 revolver. I do not see any need to use 50 grain bullets in a revolver, but some people prefer them on the theory that bullet weight is worth more than the velocity increase with lighter pills. My Lyman No. 225107 in either solid or hollow point works well in either conversion for minimum cost cast loads. The Kay-Chuk Standard is truly a more versatile conversion. Harvey did much work on this number. His first trimmed standard Hornet cases did not perform as well as he expected, with the loads he used. The current ones are perfected, with all the bugs worked out. The noise is less than the ear-splitting crack of the original Kay-Chuk at full throttle, and powder burns cleaner. Kent Bellah

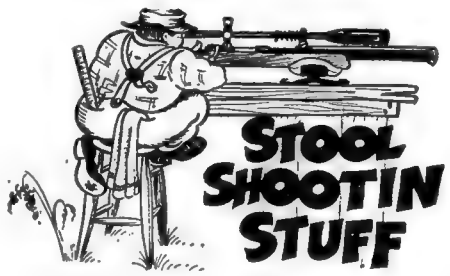
Question: Can a 6.5 Italian rifle be converted to .357 Magnum? Is a 38/44 Smith & Wesson safe to convert to a .357 Magnum? A. B. Cunningham, Florida

Answer: I do not consider the 6.5 Mannlicher-Carcano safe for sporting use with the low pressure, low velocity GI ammo, or with hand loads. These old Italian military rifles are best scrapped, or kept for a wall piece. Materials and workmanship are poor. In addition to any gunsmithing problems, it would be very foolish to convert one to .357 Magnum. These revolver cartridges in factory loads run pressure that exceeds our 30/40 Krag rifle, and no doubt some individual factory or handloads approach the pressure of a 30/06.

The 38/44 Smith & Wesson is a very strong .38 Special revolver. Any idiot with a reamer, going under the alias of "gunsmith," can quickly deepen the chambers to take the .357 Magnum cartridge. Sooner or later a good many such conversions blow up. Chills run up my spine when I hear of screw-ball conversions. Sometimes some of these booby traps fire several thousand rounds before they blow up. You never know when one will explode until you pull the trigger.

A customer has a 38/44 converted to .357 Magnum, and he buys a box of cartridges for it occasionally despite my protest. When he started letting his 14 year old son shoot it, I requested him to buy his cartridges some other place. He does, and I'm satisfied.

Winchester advises against converting their Model 92 to .357. I've owned several and know of several others. None have given trouble. I think the .310 BSA is a suitable single shot, and so is the strong Remington Rolling Block. Kent Bellah



Dear Phil:

With some of these boiling hot days on hand, I wondered how the fellows made out at the Texas and Oklahoma shoots. I imagine some of those days could have been pretty hectic and some of the nights, too, a little on the warm side. I suppose when the boys get back they will have plenty of tales to tell about, mirage and wind conditions too.

In many respects I hated to have to cancel my planned trip. I looked forward to it for a long time and bought a new station wagon and equipped it especially for that jaunt, but there is an old story about the best laid plans of mice and men, often are cancelled or altered for one reason or another. Well, that's the way the ball bounces and now we can start thinking about attending the next National Shoot.

I haven't heard who the new National Champion is or any of the news but I imagine that the entire Pine Tree Range area will be buzzing with people talking about what went on and I will have to wait another few days before hearing the news.

(Continued on Page Fourteen)

Stool Shootin Stuff

(Continued from Page Thirteen)

The trip to the Pine Tree Range is a difficult one to figure on as far as weather is concerned—I have seen it hot and windy and hot and dry, and there have been other shoots when it has been so cold and rainy that much of the pleasure of shooting was nullified.

The coming shoot ought to be a very interesting one and I sincerely hope that the old timers feature goes across well. I am a little fearful that some fellows haven't heard about it and so I am trying to alert those who I think now do not subscribe to Precision Shooting, and don't have any easy way to maintain contacts. I am taking a good hot gun for one of those old timers to use in case his shooting stick is not performing as well as he would like it, and I will provide all of the components and services that he will need to keep him shooting.

I often think back and wonder whether there are any major changes in our equipment which make us shoot better than we used to. I really don't think that there are many—the scopes are about as they used to be, the use of the dot instead of a crosshair seems to be a great improvement to me but I know that there are a lot of fellows who wouldn't have a dot in their reticule. The importance of a good solidly mounted dovetail was known in the old days and I am sorry to say that while there are many improvements that can be made in such a system of mounting a scope, no manufacturer or custom maker has come out with an improvement.

The contacts between mounts and the tube have been improved by the use of nylon, but this improvement scores its best points by reducing the wear on the tube and decreasing the friction so that the tube seems to move more smoothly under recoil. I believe the return to zero devised use on the scope tubes is perhaps the greatest of the improved features and those are so new that as yet I know of no manufacturer who has come out with one.

It's hard to estimate the number of times a fellow has forgotten to pull back the scope tube in the past, but I believe that if we honestly answer ourselves, we all can recall times when we missed doing it and paid dearly because of the larger sizes of our group. Add to this the number of groups that we made larger when we didn't realize that we had failed to pull back the tube and it can easily be seen how much advantage the return to zero systems are. As a matter of fact, I have found that now that I no longer touch the scope between firings, I have difficulty when shooting another fellow's rifle with the scope that doesn't have the return to zero feature. Scopes are very important for good shooting and they are costly gadgets too, so at best, treat them with respect and give them the same careful care in cleaning that we give our rifles. One of the disadvantages of the spring loaded return to zero device is that they are so automatic in their operation that we fail to loosen up the spring and change the position of the tube as we are cleaning the outside of the scope.

Again, barrels have undoubtedly been improved and the percentage of good ones on the line at any shoot is very high—probably twice as high as was the case in the old days. Not only are the barrels themselves better, but the quality of chamber has improved, and a great deal more precise work is being done when fitting the barrel to the receiver. This particular category has done lots in making our average groups smaller in every match that we attend. As a matter of fact, barrels are now frequently so perfect that we have to look for other sources for complaint but that doesn't mean for a minute that barrels can all be depended upon as being in the same brackets quality-wise. They do vary from manufacturer to manufacturer and from one manufacturer's lot to another. There is still a great deal that we don't know about them and when we find a good barrel we cannot with certainty determine why it is good. Such has been the condition for a long period and it is probably why most of shooters blame the barrel first for the bad groups. In so doing they are probably wrong 99% of the time. The barrel cannot do the impossible—it cannot even do the difficult—if there are other conditions which nullify all of the good work which the barrel performs. As a matter of fact, a shooter can start out with a very good barrel and very quickly ruin it—most frequently by improper cleaning methods, next by shooting through it bullets that are covered with dust and grit.

Many barrels temporarily lose their accuracy because of powder or metal fouling and it doesn't take much of a spot of brass from the case rim to spoil accuracy if that piece of brass lodges in the corner of one of the barrel grooves. The odds are 10 to 1 that it won't do your barrel much good to slug bullets in it either, and those odds increase to a higher rate if you use one rod as an anvil and tunk the core with another to make the lead slug upset. In the first place you won't get a very true reading on the lead slug and even if you did, the reading has to be on the most restricted point in the barrel. Powder fouling damages accuracy to a much greater extent than we realize and probably the best way to avoid it is by frequent cleanings rather than a dependance upon an abrasive to clean out the powder fouling.

One of my friends down in Rhode Island had a rifle that was shooting very well last year. When I saw him at one of the matches this year he didn't seem to be doing so well and I asked him what he had done with his hot gun. He told me that he still had the gun but he feared that he cooled it off considerably by a disasterous attempt to clean the powder out with diamond dust. He cleaned out the powder fouling all right but at the same time so altered the dimension and shape of the interior of the barrel that bullets soon started to keyhole.

Bullet making has improved and although the more general use of good technique gets a lot of credit for such improvement, I think we don't adequately express our appreciation to Sierra and the other manufacturers who have now so carefully tightened up their quality controls, that we rarely get a carton of jackets that has bad ones in it. Powders probably have not changed much but we now very carefully measure our charges and many of us weigh them also. No longer do we consider a case properly loaded if it just looks like it had the proper amount of powder in it.

Harve Donaldson used to say that his .219 cases would shoot good enough to win matches if one just poured powder into the case with a spoon but that statement doesn't hold true now when we shoot all day long for a few thousands of an inch difference in aggregate.

In spite of some of the queer looking gimmicks on the line which are called rifles, a great percentage of them now are pretty carefully stocked. Free floating

barrels have come forward to the point where they are in the majority but they have also retreated to the extent of permitting a little support to the barrel—possibly just a few inches forward of the receiver. This one development in stocking has taken a lot of the erratic performance out of guns.

The heavy reenforcements of the actions, the custom made actions and new triggers all do much to enable us to depend upon our rifle making small groups more frequently but they, like the barrels, cannot do it by themselves. The other features of the gun must be doing their part.

What about technique? Well, I don't know as we have learned very many new things, we've just probably sifted them out and now we are using the best of them. No longer do we have to think that we must sit at the bench at a relaxed and comfortable position, we do that automatically. We don't have to say to ourselves, "no cheek pressure, no shoulder pressure, no tight thumb on the grip, no side pressure on the trigger, our eye just far enough back on the scope to get full feel." We just do all of those things automatically now because we have had more experience at it. Some folks use soft sandbags, some use hard, some use mechanical gadgets and they all shoot well and other factors are in line. Since the old timers' days we have cast off many things as being unimportant which they thought were essential, and in the future we, too, shall be casting off some of our ideas of today. It's all progress and it's all fun but it has its serious side and the game should live if we nurture it properly.

Phil, it was mighty good to see Bob Stinehour at Southboro and it was mighty good to see that in spite of his crutches, Bob was able to get up there to the bench and shoot in his old time form. He sure had a close call but now that he is on the way back we all hope that he will never lose that competitive spirit which often announces whether he has gotten a bad shot or a good one, with the same amount of enthusiasm to the other

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Stool Shootin Stuff

(Continued from Page Fifteen)

shooters on the line on either side of him. For these announcements I have sometimes avoided making mistakes. The only complaint I have is that it slows up my shooting if I have to keep track of his too. In that case he is all done while the conditions were good and leaves me to finish out the string in a lot of mirage and gusty wind changes.

Cordially yours,

Ernest Stuhlbacher

DIVISION LEAD PRODUCTS

By Kent Bellah

Division Lead Co., 7742 West 61st Place, Summit, Illinois, has an excellent line of lead and lead alloy products created especially for reloading precision ammunition. This is one of the world's largest producers of non-ferrous metals. They know a great deal about such metals, and when they made a bid for business in the reloading field they started with an open mind. The first step was to make a careful study of bullet metals, of the type suited for precision reloading.

Their metallurgist developed a large group of alloys considered suitable for cast rifle and handgun bullets. Working samples were submitted to three independent laboratories to test for all desired qualities. The lab reports were carefully compared, and believe it or not, the experts agreed, for once. Samples were also submitted to some top shooters for field tests on targets and game. The best alloys were Illinois Bullet Alloy (IBA) No. 4 (for revolvers,) and IBA No. 7 (for rifles and all handguns,) listed at Brinell 12 and 18 respectively. The Brinell numbers indicate the hardness, and have nothing to do with the quality. mended for revolver velocity up to about

Illinois Bullet Alloy No. 4 is recom-1,000 feet per second. IBA No. 7 is best for Hi-V .357 and .44 Magnum loads, and all .45 ACP and rifle loads. I've reved it up much faster than recommended, with no leading or other troubles. Top velocity depends much on your gun, bullet, powder type, and other factors.

Both alloys are extremely uniform in quality, made of pure virgin metals, with a minimum amount of contaminating products. (All commercially pure metals contain traces of undesirable products. The best grades are held to a minimum.) Both alloys cast easily and drop freely from the mould. One police department had been using any available "lead," and making their own alloy for .38 Special target practice. An officer told me their scores jumped noticeably after they switched to IBA No. 7.

Both numbers were originally supplied in 14" lengths of wire that was not suitable for soft, swaged bullets. As some shooters used it for swaging, Division Lead wisely started supplying both alloys in one or five pound linked ingots, weighing 5 or 25 pounds respectively. Each ingot has the brand and alloy number cast in the metal to prevent a mix-up. The one pound size is just right to feed a SAECO Thermostat Electric Furnace, or other pot. You can accurately melt off one to five pounds, or break off individual ingots. This size is convenient to use and compact to store. The big five pound "pigs" can be used in the SAECO "Utility" Electric Furnace, and other large pots, that some casters use with gang moulds and ladles. They are slower to melt, and generally less satisfactory for average individuals than the smaller "pigs."

It's more difficult to make top quality alloy, uniform from batch to batch than most casters think. The average lad makes non-uniform alloy, and non-uniform batches. There is a tremendous variation in "lead," and much more variation in alloys. You can make bullets of a sort, if you want that sort of bullets, from almost any scrap. Unfortunately, some metals and alloys that are sold for bullet making are made from scrap and salvage metals, and are no better or more uniform than scrap you can salvage. They may contain excessive amounts of anything.

Home mixed alloys have a rather low average quality, especially those containing antimony. I've never recommended home mixing any ternary alloy, or any antimonial alloy, even with quality virgin metals. Generally, the best bullets are made with alloys containing antimony. Illinois Bullet Alloys are really fine. The cost is only a very few cents more per box of ammo than using the cheapest scrap. It may surprise some shooters to know that the cost is probably no higher than home mixed alloys made of quality virgin metals.

Pure lead core, half-jacket swaged revolver bullets, fired without lubrication (like rifle pills,) have been correctly called "The Most Deadly Bullets." They have become more popular every day since Jim Harvey made a major breakthrough with his famous Jugulars in 1956. Dinky .38's can be loaded to equal .357 factory ammo. Magnum guns give about double efficiency with moderate recoil and pressure. Since Harvey first brought out dies for home swaging, numerous other makes came out with various variations in design, in both the dies and the bullets.

C-H Die Company designed their Swag-O-Matic, a complete die and press unit to swage bullets, selling for a low $33.00. It forms a beautiful bullet in seconds, with adequate mechanical advantage for easy operation. Briefly, you place a core in a jacket, place the assembly on the die, operate the handle twice, and a perfect bullet is ejected, ready to load without sizing, sorting or lube. A little child can do it, it's so simple. Six types of bullet nose punches are available. Bullet weight is selected by simply screwing the nose punch in or out of the press. Extra caliber dies are $9.00, and are well finished. Ejected bullets are "clean," meaning they have no visible bleed-off tit, this being sheared "clean" by the dies.

C-H has a "Universal" lead wire cutter at $7.50, that cuts all sizes of wire. Slugs are cut easily as fast as you can work the handle. Slug weight does not have to be exact, so long as the slug and cup weigh 2 to 5 grains more than the desired bullet weight. Cores bleed-off excess lead in the first operation of the Swag-O-Matic handle, and bullets form perfectly in the second stroke, ejected out of the die automatically.

Division Lead quickly saw the advantage of swaged bullets and designed Swag-O-Matic virgin lead wire especially for them. This high grade wire, Brinell 4, is supplied in 25 pound packages of 14" lengths, in .38-357 and .44-45 calibers. It is dead soft and cuts and forms easily. Only pure lead is recommended. Lads who do not want to cut slugs can obtain a Harvey Core Mould for casting cores. The Division wire is equally good for casting cores, or for mixing alloys for cast pills. Dealers will sell part of a box.

Shotshell loading is a booming hobby that has spread like a prairie fire in recent years. You can reload tubes for about half the price of factory ammo. The better loading machines, such as C-H, D-L, MEC, etc, are fast and efficient, far better than the methods of several years ago for clobbering up a very few non-uniform shotshells. The new loaders have saved money and brought many hours of pleasure to many rank beginners in reloading. In addition, they have caused many a rank novice to see the simplicity, cash savings, and fun of reloading superior metallic cartridges. They have done much to create interest in the finest hobbies on earth, shooting and reloading.

Division Lead supplies the excellent Illinois Chilled Shot in all sizes, uniform in diameter, roundness and hardness. They also supply lead Buckshot in all sizes. Their newest item is their premium grade Illinois Copper Plated Chilled Shot in sizes 4, 5, 6, and 7½. These give excellent patterns and eliminate leading, as fewer pellets are deformed in the bore. They glitter like polished gold.

Reloads in my fine Hi-Standard Supermatic Trophy (a scattergun with the same prestige name as my favorite .22 auto pistol,) actually exceed equivalent factory ammo. The gas operated Trophy is fine for testing, as recoil is light and smooth, it throws beautiful patterns at any choke setting, and functions perfectly with all loads without any adjustment. The metal work and finish are fully up to Hi-Standard's high standard of quality.

If Division Lead products are not available locally, write them for the name of your nearest dealer. (If you are a dealer, ask for the name of your nearest jobber.) I think you'll appreciate their effort and expense to produce quality products. May their tribe increase in the entire firearms field!

BOOK REVIEW

SMALL ARMS OF THE WORLD, by W. H. B. Smith, (The Stackpole Co., Harrisburg, Pa., $15.00) has just come out in a brand new Sixth Edition. This has been revised, corrected, and enlarged, since it first came out in 1943 under the title "The Basic Manual of Small Arms." This new edition is right up to the minute, and about as error-free as a work of this type can be. In fact, I haven't found any errors at this writing, although I haven't had time to read it carefully. It's THE book on this subject. No other is like it.

Every gun fan or shooter deserves to own this fine book. The Sixth Edition was revised and enlarged by Joseph E. Smith, of the Office Of Chief of Ordnance, U. S. Army. He did a fine job. The book has 1,700 illustrations, which is a whale of a lot of pictures. It requires 47 chapters with 725 pages to cover all small arms of all nations, with clear, illustrated details on how to load, strip, assemble, and identify arms. The book is as much for a rank novice as the professional gunsmith, arms designer, collector, serviceman, or just a guy who likes guns. Inventors, manufacturers and law enforcement officers will find it's a "must."

It has greatly expanded coverage on U. S. and USSR weapons. Eight new countries are in this edition, and so are scores of new weapons. Two special chapters are on small arms ammunition. The new text covers more than 259 separate arms manuals. Owners of all older editions will certainly want this Sixth Edition, that makes all the others obsolete.—Kent Bellah.

COMING: A report of the first of a series of experiments with barrel vibrations. A further discussion of cast versus jacketed bullets for handgun target shooting. A moving backer target system which also identifies cross-fires in bench rest match shooting. A report on the chronographing of bench rest rifle target loads at the recent national shoot at Tulsa, Oklahoma. A comparison of the .222 Rem. Magnum versus standard .222 Rem. performance.

SMALLBORE CHAMP'S EQUIPMENT: Equipment used by the three Championships is reported as follows: high in the 1960 National Smallbore Arthur E. Cook, winner—Morgan-Johnson rifle and Remington ammunition, score 6390-508x. Victor L. Auer, second place—Remington Mod. 37 with Douglas barrel and EZXS ammunition, score 6384-429x. Verle F. Wright third place—Remington rifle and Western ammunition, score 6381-458x.

It is also reported that Cook won by a wider margin than ever before recorded; 6 points and 79x over second place winner.

LETTERS

Dear Sir:

Your LETTERS column in the July issue printed two letters by one Dermot C. Reilly. In the first he belabored the thought that Winchester might introduce a .30 Magnum on the .264-.338 case and stated that he would favor the return of the .30 Newton instead. Now—sentiment is nice and there are a **few** of the old .30 Newtons around, but it would be infinitely more simple for the factory to bring out a .30 Win. Magnum than to reproduce a separate design which would be no real improvement in any way over a .30-.338. Also, Mr. Reilly inferred that such a case would require a longer bolt throw than the .30-06 family. If he'd checked, he'd have noticed that the case lengths of all the new Win. Magnums are in the .30-06 bracket and are all **shorter** than the .270 Win. There are also quite a number of rifles already being chambered for the .30-.338. I believe that A & M, for one, are supplying these chamberings.

In his second letter he questioned the use of the phrase "over bore capacity." Before I begin, I'd like to wonder what Mr. Reilly would suggest as a substitute. It has been my understanding that "bore capacity" refers to that size case which holds the maximum amount of powder which can be **efficiently** utilized in a certain bore size. Thus, bore capacity is reached in .22 caliber at about 40 grains, in .25 caliber at about 55 grains and in .30 caliber at about 70 grains. If greater amounts are used in these calibers the laws of diminishing returns enter the picture in increasing proportions. The "bore capacity" will vary somewhat with different powder types and bullet weights and is even more greatly affected by the normal working pressure; the bore capacity is increased considerably if we are able to use working pressures in the 60,000 lb. range instead of in the usual 50,000 area. The validity of the theory (?) of "bore capacity" is substantiated by the fact that it is not possible to significantly increase the velocity of 117-120 grain .257 pills beyond 3300 f/s or to beat 3200 with 160 gr. 7 m/m's. An extreme example can be made of the .244 H&H case. This case is ridiculously over bore capacity and, in spite of its enormous capacity, it is incapable of substantially beating the velocities of many smaller cases. Actually all the .244 H&H really achieved was to devise an extremely rapid method of eroding barrels to uselessness. It can occasionally be profitable to exceed "bore capacity," but never to any great degree. Weatherby to my mind exceeds bore capacity but also (my opinion, again) takes advantage of his extremely strong actions and special hotter primers to use working pressures in the 60,000 lb. range (or very near to it). He of course "pays the piper" in shorter barrel life. I'm not against using these higher pressures, of course, as they are an inevitable product of our quest for higher velocity. The problem is in finding suitable components. Given primers which would hold I'd not hesitate to use loads in the 60,000 lb. range in the fantastically strong Weatherbee Mark V action. (Wish I could afford one.)

Sincerely,
R. W. Boenker
Waldport, Oregon

6.5 M/M EXPERIENCES

Dear Sir:

Lots of interesting "stuff" in Precision Shooting, and a lot of food for thought. Sometimes, however, there is room for variance based on the experience of others than the ones writing in your publication.

With no intent of challenging the statements and experimental results as reported in the June issue, page 5, "Some Rifle Experiences" by Mr. Paul Wright, which I read and reread with consumate interest, I still have a question or two and a comment to make with respect to the last paragraph of his report, wherein he remarks on the remarkable 6.5 Norma match bullet in 139 grain. This as to possible 1000 yard performance.

As a 6.5 afficionado for many years, it has been my pleasure to develop some remarkable performance with this caliber in several cases. When Norma components became readily available, reasoning that as the .30 caliber has been developed to a high degree of performance in our country, so the 6.5 should have had the benefit of the same degree of development in Scandinavia. Therefore, I ordered 500 Norma 139 grain MATCH BT full patch bullets. On receiving same, I proceeded to use the better part of a working day in weighing each of the 500 and sorting them according to weight. Following is the result:

Lightest weight, 135.5 gr. Heaviest weight, 140-6 gr. Percent of 500 weighing 139.0 gr., 13.6%. Weighing 139.1 to 139.3 gr., 38%. Weighing 138.6 to 138.9 grs., 19.4%.

We have 71% weighing between 138.6 and 139.3 grains. Balance of the lot ranged in the lightest to heaviest category, which I will not report in detail. I was surprised at the variation, and ran a check on a lot of 100 FA match 172

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grain with the result of a variance of just over .4 grain from low to high. Next followed an accuracy test, using a 28" heavy barrel on an '03 action.

First 10 shots with Sierra 140 gr. BT at 400 yards, prone with sandbag forearm rest and sandbag under stock just ahead of butt. Total spread, 3½ inches. Load was 56.5 grs. 4350 in Super-X .270 cases necked to 6.5 with shoulder of 35 degrees, MV 3200 by chronograph.

Ten shots using cases from same lot and Norma 139 gr. BT Match of exactly 139 grains gave spread of 6 inches.

Cases from same lot, bullets 139 gr. BT Norma; one of 135.5 gr., low end, one of 140.6 grain, high end, balance selected at random from the balance of the 15 lots I arrived at by weight. Group ran 5½ inches. Perhaps I proved something; to me it indicated a factor other than variation in bullet weight.

Next step was to run a test using a spinner and dial indicator which showed an average eccentricity on the ogive and point of nearly .002. Same test on Sierra 140 BT was less than .0005.

Now I laid out a block of hardwood and built a small dam around the area used to plunk down a small quantity of Accra Glass into which I laid several Norma 139 gr. BT and a couple of Sierra 140 gr. BT. When the mix had cured a couple of days, I carefully milled off exactly ½ diameter of each bullet and for me I found the answer. The mild steel jacket of the Norma bullet varied in thickness on several of the sectioned 139 gr. BT. Using a 20X glass and an accurate caliper, variation of better than .005 could be demonstrated. The Sierra showed no variation.

This is just one man's excuse for a scientific test, but the answer should be obvious as to why the variation in grouping. Conditions of firing were uniform, as it was done early one morning before any wind or mirage came up, and actual firing required about 20 minutes for the 30 shots fired. No attempt was made to cool off the barrel, and the rifle used had previously demonstrated that repeated firing of long strings resulted in no zero change. A B&L 6-24 scope was used in the test. My conclusion as to using Norma for accurate shooting concurs with that of several of our match shooters in this area. We have concluded that best performance cannot be had with Norma bullets and as far as Norma cases are concerned, unless the loading level is held considerably below what can be loaded in Super-Speed or Super-X cases, the brass isn't worth much, either.

Now my question: What results has Mr. Wright had with Norma 139 BT? His article dealt with 7 m/m, but from the closing remark, I gather he has worked with the 6.5 m/m. Would like to know his findings.

I have never gone back to Norma for any components, in view of the fact that all their bullets, to my knowledge, have the mild steel jackets.

Jerry Shannon

Spanaway, Washington

(Editor's comment: My only experience with Norma bullets has been with a recent lot of the new 187 gr. BT Match bullet in .30 caliber. Fired in a medium heavy Springfield Sporter at 200 yards, using a 10X target scope and firing from bench rest under good testing conditions; with my loading and my shooting, these Norma bullets gave approximately the same accuracy as check loads with my home swaged 145 grain bullets, which I consider accurate. Check weighing a random lot of the bullets before doing any shooting, the total variation was between 186.5 and 187.5 grains, with 82% of the weighed bullets within an 0.2 grain variation.

I have this season been using Norma cases in three calibers (.30-06, .308 Win. and .257 Roberts) with complete satisfaction. These current production Norma cases are a little lighter than Remington cases, but somewhat heavier than Winchester-Western cases. For max. loads this variation in weight (and capacity) should be taken into consideration in working UP TO MAX. LOADS.

There does seem to be evidence that in past years, when Norma was first entering the U. S. market, that some lots of off-quality products did get into the trade channels. This writer does feel, however, that today's judgment on Norma products should be based on current rather than past production and marketing.)

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4. First and Second places, 300 meters, Du Bois, Pa., 1957, Clair Taylor and Don Rob
5. National Match Course, Du Bois, Pa., 1957, 1st, 3rd, 6th, 7th places.
6. National Match 10-shot 100 yd. aggregate, Augusta, O. Al Creighton, .3105".
7. National Bench Rest Championship, Johnstown, New York, 1955, Sam Clark, Jr.
8. 10 Shot 200 yard WORLD RECORD, Du Bois, Pa., 1954, Sam Clark, Jr. Score, or Group, .5276"
9. 10 Shot 200 yard WORLD RECORD, Du Bois, Pa., 1956, H. L. Culver (Present record) Group size .4016"
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11. 1000 Yard, Famous Wimbledon match, any sight, 1956, Camp Perry, O. Frank Conway.*
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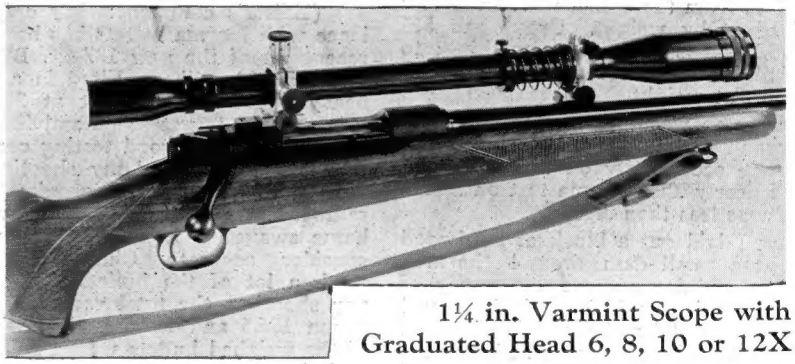

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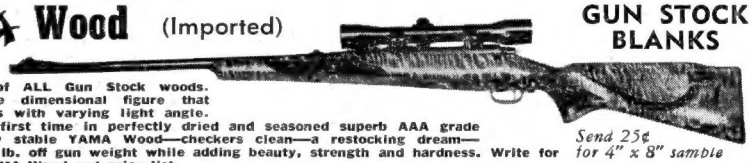

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